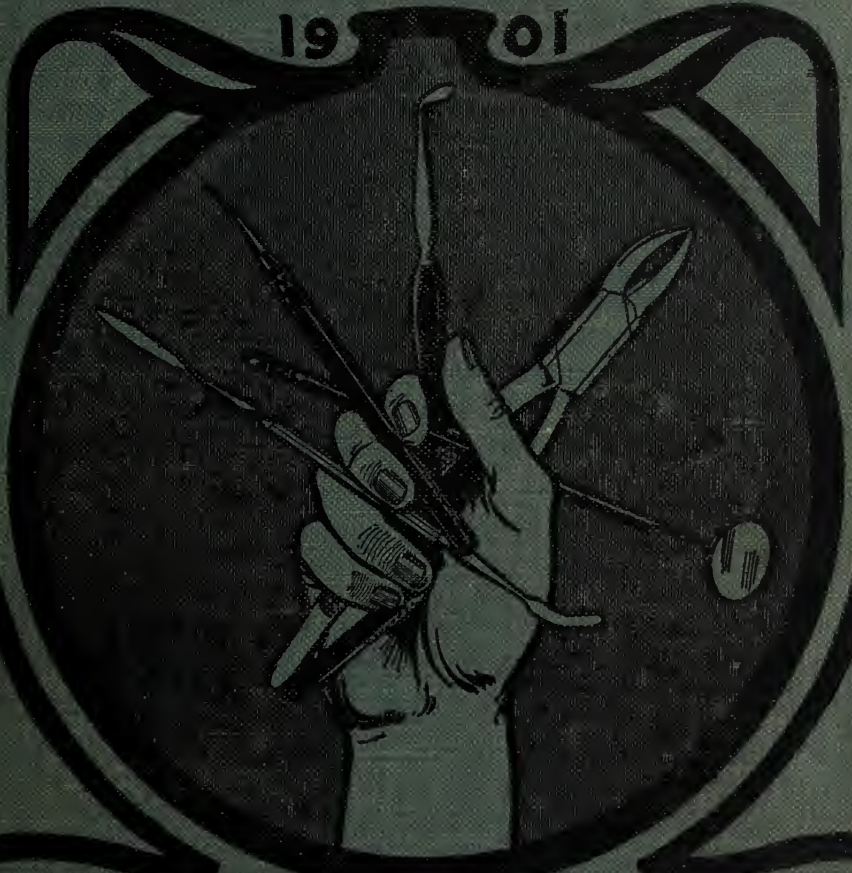
DENTAL FVRNITVRE INSTRVMENTS AND MATERIALS

ILLVSTRATED CATALOGVE 19 01



THIRD EDITION.

M. F. PATTERSON.

DENTAL DEPOTS:

St. Paul, Minn., Minneapolis, Minn.,
Milwaukee, Wis., Des Moines, Iowa.

Univ.of Ill. Library
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OUR INTENTION is to present each of our customers with a copy of this catalogue.

When we say a copy we mean one copy.

The only possible condition under which a duplicate copy may be had is upon payment of three dollars ($3.00), which approximates the actual cost of the book.

Positively no exceptions will be made to this rule.

HIS IS THE most prominent page in this book.

On this page we have a very important suggestion to make.

We have spent a great deal of time and a great deal of money in the production of this catalogue. We have corrected prices up to date of issue. We have not spent our time and money for the enjoyment we get out of seeing our name in print. We have published this catalogue for the convenience of the man we send it to.

We want him to know what we carry in stock, and we want him to know the price of the things he wants to order.

We believe every man we send it to will appreciate it. If he appreciates it, as he is justified in appreciating it, he is bound to do four things.

FIRST: He will write and tell us so.

SECOND: He will keep the book up to date by noting changes of prices as they occur.

THIRD: He will appreciate that the firm that compiles and prints and presents him with a book like this must have the stock and service to back it up.

FOURTH: He will use this catalogue when he orders goods, and demonstrate his appreciation by sending his orders here.

He simply can't send them anywhere else and get the same stock or service or satisfaction.

THIRD EDITION

OF

M. F. PATTERSON'S

ILLUSTRATED CATALOGUE

OF

DENTAL FURNITURE,

INSTRUMENTS AND MATERIALS.

REVISED AND ENLARGED.

All former Price Lists and Catalogues are hereby cancelled.

M. F. PATTERSON,

DENTAL DEPOTS:

ST. PAUL, MINN., Ryan Building, Seventh and Robert Streets.
MINNEAPOLIS, MINN., Medical Block, Second Floor, 608 Nicollet Avenue.
MILWAUKEE, WIS., Goldsmith Building, 141 Wisconsin Street.
DES MOINES, IOWA, 216 Fifth Street.

1901

MURDOCH-KERR PRESS,
PITTSBURGH.

INTRODUCTION.

NEARLY three years have elapsed since we published our second Catalogue, and in producing the third edition we hope to keep abreast of the times, and produce a book which shall present all the articles needed in practicing Dentistry.

Remarkable changes (especially in prices) during that time have been the immediate cause of the appearance of the third edition; but not the least is the long list of new goods which have become staple. This being especially applicable to Electric Appliances, which are a necessity in the modern equipped Dental Office.

In our four Depots we are carrying the largest and best assorted stock of Dental goods to be found in the western country. Our constantly increasing business forces us to seek new and larger quarters, and new methods for the better and quicker handling of same. We are carrying a larger and better assorted stock than ever, and constantly adding new goods upon appearance of same.

We pride ourselves upon the quick returns made in our shipping department, and our endeavor is to get goods to our customers by the first train possible. Our stock and service warrant the best and quickest returns to be made of any Depot in the West.

Our Tooth Department is especially equipped to fill the most difficult cases. Our stock and service will warrant us in saying that we cannot be excelled, or equaled, in this most particular part of the business.

As we carry all the various grades of goods no especial mention is made of quality, any further than is indicated by the price, and we will say that, price considered, no better goods can be obtained.

Thanking you for past favors we trust our efforts shall meet your approval and we will receive your liberal patronage in the future.

Respectfully,

M. F. PATTERSON.

SUGGESTIONS FOR ORDERING.

IT IS EASIER to order goods here than any place we know of. We have no rules about orders.

All we want a customer to do is to tell us what he wants in as few words as he can—in as plain English as he is master of.

If we know what he wants he will get what he wants.

These are Suggestions.

Write name, town, county and state on every order. Address orders only to the firm.

In referring to former orders, give date as nearly as possible. Tell us how goods are to be sent.

Never enclose an order in a package and always have sender's name on packages. It is as important for packages to bear sender's name as our name.

Terms.

Accounts will be opened with responsible persons subject to conditions that govern any ordinary business house. Those conditions are proper evidence of responsibility in the form of reference, etc. Upon monthly balances paid by the 10th of the month we allow a discount of 2 per cent. on all goods except precious metals.

Cash Discounts.

In the absence of account being opened in regular form, cash must accompany all orders.

For spot cash the prices in this catalogue are subject to the following discounts:

Three per cent. on bills up to $25.00,
Five per cent. on bills from $25.00 to $100.00,
Ten per cent. on bills over $100.00.

Remittances should be made by drafts on New York or Chicago, or in the form of express or post office money orders. Goods will be send C. O. D. to strangers only upon receipt of a sufficient amount to guarantee good faith.

Responsibility.

When goods leave our hands they become the property of the purchaser. We assume no responsibility for safe delivery. Our responsibility ends with the exercise of all possible care in packing, addressing and forwarding. Goods are forwarded by mail at the sole and exclusive risk of the purchaser.

Our terms for precious metals are strictly and absolutely spot cash.

TOOTH DEPARTMENT.

WE HAVE a reason for devoting the first part of this catalogue to our Tooth Department.

Our Tooth Department is the first part of our business. It is the most important part.

It is the one particular feature of our business we have nursed and patted and hammered into shape until to-day there isn't a better or a more complete tooth department in the United States than our tooth department.

We are proud of it.

If we knew any way to improve it we would change it. There simply isn't any way.

Porcelain Teeth.

We handle the product of five different tooth factories. Our stock of each make is just as complete as if we carried but one make.

Dentists sending tooth orders here are more likely to get just what they want than if the order goes to the factory. The reason for this is perfectly obvious. We are not interested in pushing the sale of any one brand of teeth. It is our business to send a customer just exactly what his order calls for. If he specifies a Justi tooth he will get nothing else. If he sends a sample for shade that he wants duplicated we know the make to send him. We have the choice of five lines of teeth. We couldn't very well get along with any less. If we could we wouldn't want to.

The teeth we sell vary in prices. We have the markets of the world to choose from. We honestly believe Justi and White and Ash and Sibley and Thompson teeth are the best teeth selling at Justi and White and Ash and Sibley and Thompson prices.

Each is the best of its class.

The illustrations used are our own. They do not refer to any particular make of teeth. Any make of teeth may be ordered from them.

Justi, White, Ash and Sibley each make shade guides. We wish every dentist had all four of them. If a man orders a Justi tooth from a White shade guide he isn't as sure of results as if he had used a Justi shade guide. The same thing applies to Sibley's teeth.

In ordering always specify whether gum or plain, vulcanite or plate teeth are desired.

PRICE LIST OF TEETH.

H. D. Justi & Son's.

	Retail.	$25.00 Lots.	$50.00 Lots.	$100.00 Lots.	$300.00 Lots.
Gum Sections	$0.15	$0.14	$0.13½	$0.12½	$0.11½
Gum Plate and Rubber	.15	.14	.13½	.12½	.11½
Plain Rubber and Plate	.14	.13	.12½	.11½	.10½
Flat Back, Long Pin, Plain and Gum	.15	.14	.13½	.12½	.11½
Plain Plate and Rubber, Hand Stained	.25	.23	.22	.20	.18
Gum Teeth, Hand Stained	.28	.26	.25	.23	.21
Allen's Continuous Gum	.14	.13	.12½	.11½	.10½

Gideon Sibley's.

	Each.	$25.00 Lots.	$50.00 Lots.	$100.00 Lots.
Gum Rubber Teeth	$0.10	$0.09½	$0.09	$0.08½
Plain Rubber Teeth	.10	.09½	.09	.08½
Gum and Plain Plate Teeth (Short Pins)	.10	.09½	.09	.08½
Flat Back and Long Pin Teeth	.12	.11½	.11	.10½

Thompson Dental Manufacturing Co.'s.

Single Sets, Gum or Plain	$ 1.15
23 Sets	25.00
48 Sets	50.00
100 Sets	100.00

Above prices subject to our usual cash discounts.

Price of Teeth.—Continued.

S. S. White Dental Mfg. Company.

	Each.	$25 Lots.	$50 Lots.	$100 Lots.	$300 Lots.
PLAIN TEETH, SHORT PINS.					
Plain Rubber, Plain Plate, Celluloid, Countersunk Pin, Cavity Stoppers, with Pins	.14	.13	.12½	.11½	.10½
Continuous Gum	.14	.13	.12½	.11½	.10½
GUM TEETH.					
Gum Sectional, Gum Rubber, Single, Gum Plate	.15	.14	.13½	.12½	.11½
LONG PIN TEETH.					
Flat Back, Gum and Plain, Bicuspid and Molar Facings, Lower Fronts, Bicuspids and Molars, both Plate and Saddle-back	.15	.14	.13½	.12½	.11½
CROWNS.					
Logan, one Pin	.60	.57	.55	.52	.50
Logan, two Pins	.65	.62	.60	.57	.55
Cusp	.14	.13	.12½	.11½	.10½
Wood Pivot	.06	.05¾	.05½	.05	.04½
MISCELLANEOUS.					
Plain Hand-Stained and Smokers' Teeth	.25	.23	.22	.20	.18
Perforated Molars and Bicuspids, Gum Sectional	.12½	.11½	.11	.10	.09
Perforated Molars and Bicuspids, Plain, Cavity Stoppers, without Pins	.06	.05¾	.05½	.05	.04½
Diatoric	.06	.05¾	.05½	.05	.04½
Porcelain Inlays	.05				
Porcelain Inlays, Lots of 100	.04				
Porcelain Inlay Rods	.08				
Miniature Sets	.60				

C. Ash & Son's.

	Each.	$10 Lots.	$25 Lots.	$50 Lots.	$100 Lots.
Flat, for Metal Plate Crown and Bridge Work	.17	.16½	.16	.15	.14
Vulcanite (double-headed Pins)	.14	.13½	.13	.12½	.12
Pinless (for Vulcanite Work), Set 14	1.00	.95	.90	.85	.75
Tube Teeth and Tooth Crowns	.25	.24	.23	.22	.20

New Shade Ring free with all quantity lots of Ash & Son's teeth.

Cavities in Artificial Teeth.

A good many dentists drill their own cavities. A good many more prefer to have us drill them. We have this part of our business down to a fine art. We have never heard of the gold coming out of a cavity we have prepared.

Cavities should be drilled before plate is made. It insures better results. We are not overly particular about it but that is our preference.

Cavities in artificial teeth, each ..... 25 cents.

MADE IN U. S. A.

H. D. JUSTI & SON'S SAMPLE SHADE HOLDER.

Patent Nov. 10th, 1896. Patent Applied For.

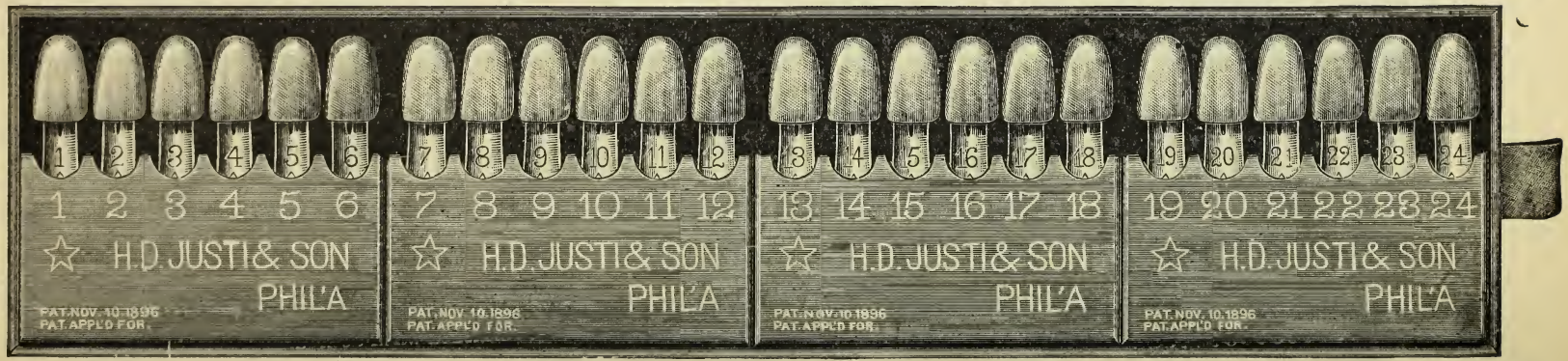
PHILADELPHIA. BRANCH, CHICAGO.

The **originality** of our Porcelain Teeth in regards to **shape, strength** and **natural blending of colors** is too well known throughout the world to need any further comment.

This holder is made in four sections and each tooth can be separately withdrawn and used in desired positions. A convenience which heretofore has never been offered to the profession.

Our assortment of shades is endless from light to dark in all shadings. From experience in selecting shades we think these twenty-four shades will meet nearly all requirements, but intermediate shades will be furnished when desired.

PRICE, $1.75.



H. D. Justi & Son's Sample Shade Holder as shown; each, $1.75.

The S. S. White Dental Mfg. Co.'s Shade Guide, consisting of twenty-five shades, from 26 to 50 on bar; each, $1.50.

Gideon Sibley's Shade Guide, consisting of twenty-five shades, from 1 to 25 on ring; each, $1.25.

Teeth in Quantities.

THERE ARE TWO reasons why every dentist with even a reasonably large practice should buy teeth in quantities.

First: Every dentist knows the advantage of having a stock of teeth in his office. It gives him a prestige and a standing with his patients. It saves him time.

Second: To buy teeth in quantities is a gilt edged investment. No bank is paying a rate of interest that even approximates the saving effected by buying teeth at wholesale. The discount for large purchases amounts to from ten to twenty-five per cent., depending upon quantity.

No business man would buy an article at retail and pay a retail price for it if he had the option of buying in somewhat larger quantities and making any such return as that on his investment.

It would pay any dentist to borrow money to invest in a stock of teeth.

Atrificial teeth do not go out of style. Any man who invests in them can't by any possible chance stand to lose anything on them.

When it comes to selling teeth in quantities we are headquarters. We are selling more teeth in quantities each successive year.

We are always ready to exchange teeth that have been purchased from us. No man living can select one or two or three hundred dollars' worth of teeth and use them up to the last set and have every set suit. If he buys them here and runs across a case he can't suit from his stock, if he boxes up a set and sends it to us it doesn't cost him a cent for the exchange. He can keep right on doing that until the very last set is used up and disposed of, if he wants to.

We will ship teeth for selection to any responsible man in any reasonable quantity.

Orders for Teeth.

We have no rules about orders for teeth. If they are clear and concise and tell our tooth clerks what is wanted, that's all we care for. If an order isn't clear and concise, we have to guess. If we have to guess, we are quite likely to have to guess again. Before sending an order for teeth it should be re-read. Put yourself in our place. If you would understand it we will understand it.

Definition and Illustration of Terms Employed to Express Varieties of Styles of Teeth.

"Short or Long Ridge Lap."—The form of the heel or butt of the tooth.

"Short or Long Shut."—The distance between the upper and lower maxillæ when the mouth is naturally closed.

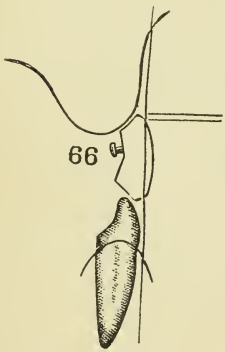
"Short or Long Bite."—The extent of the lap of the upper tooth over the lower.

"Shoulder Bite."—The striking of the occluding teeth upon a shoulder.

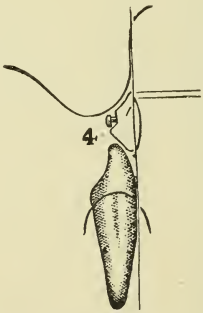
Flat-Faced Teeth.—Those intended for cases of protruding upper jaw.

Bow-Faced Teeth.—Those intended for cases of protruding lower jaw.

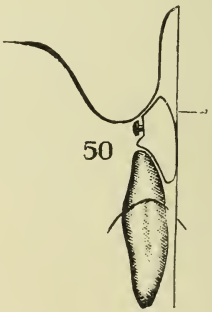
The following cuts illustrate what is meant:



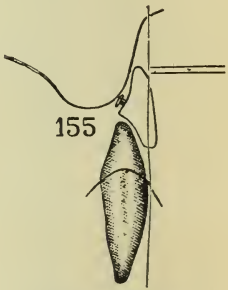
Short Ridge Lap
Long Shut.
Short Bite.



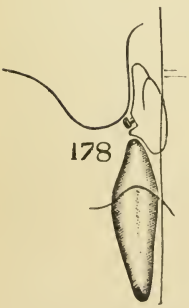
Short Ridge Lap.
Short Shut.
Short Bite.



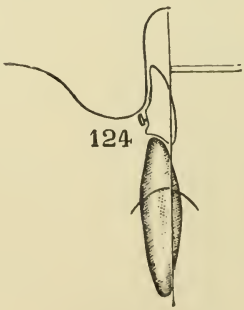
Short Ridge Lap.
Short Shut.
Long Bite.



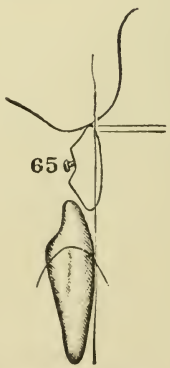
Long Ridge Lap.
Short Shut.
Long Bite.



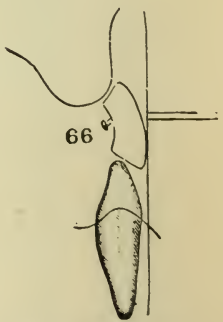
Long Ridge Lap.
Short Shut.
Short Bite.



Long Ridge Lap.
Short Shut.
Shoulder Bite.



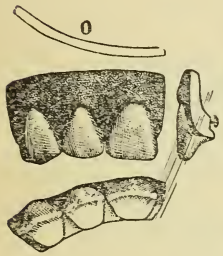
Flat-Faced Tooth
for Protruding
Upper Jaw.

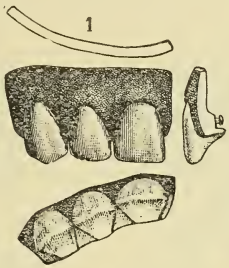


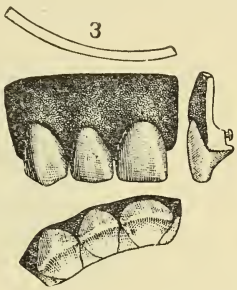
Bow-Faced Tooth for
Protruding Lower
Jaw.

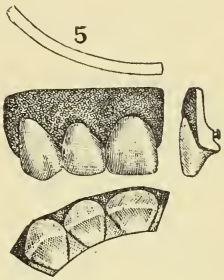
Chart of Gum Sections, Upper, Sets of 14.

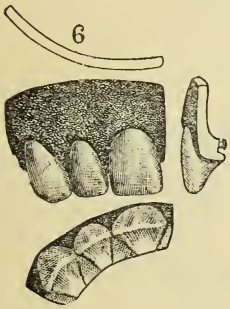
Order any make of teeth from these illustrations.

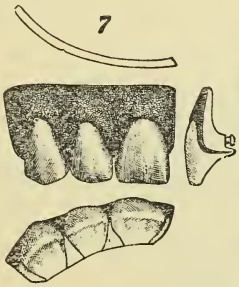


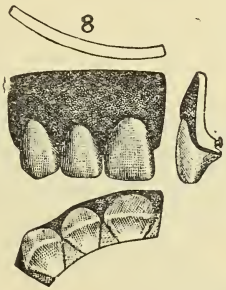


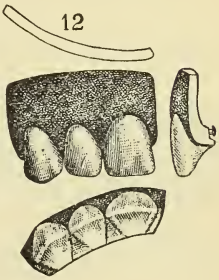


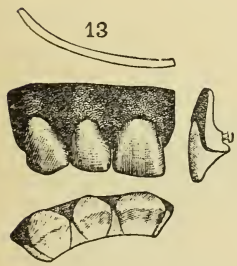


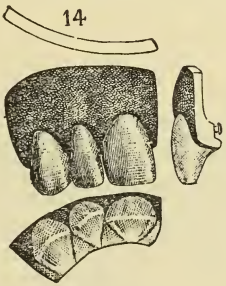


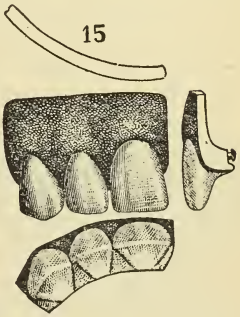


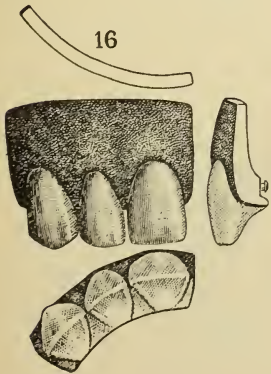


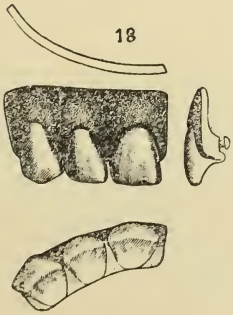












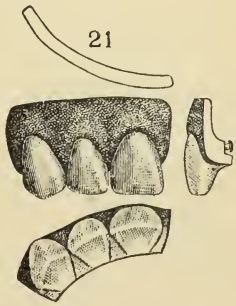
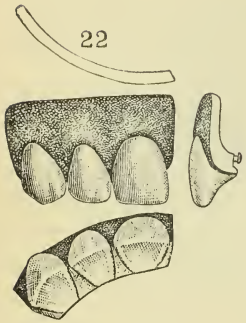
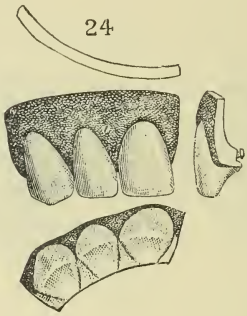
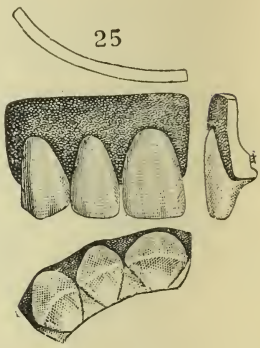


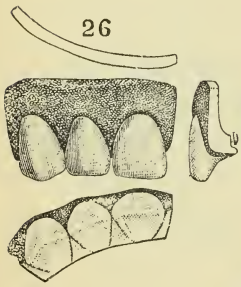
Chart of Gum Sections, Upper, Sets of 14.—Continued.

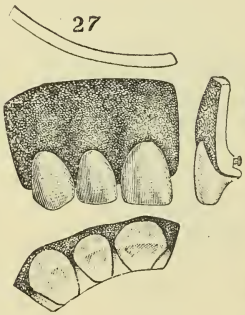
Order any make of teeth from these illustrations.

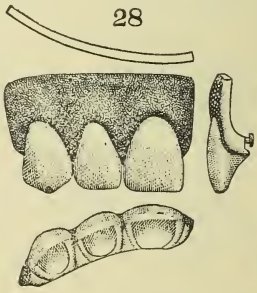


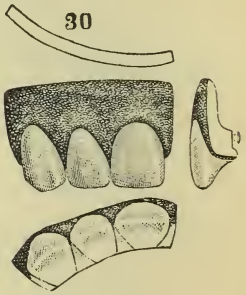


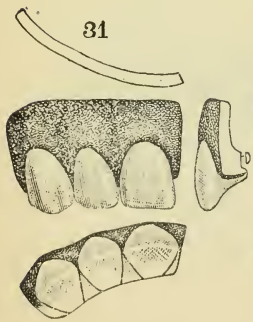


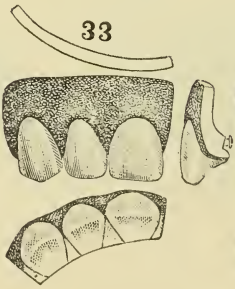


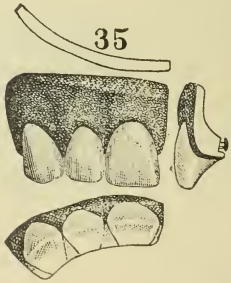


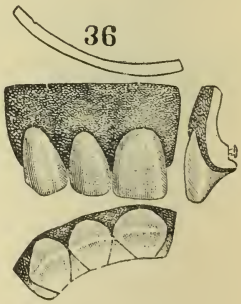


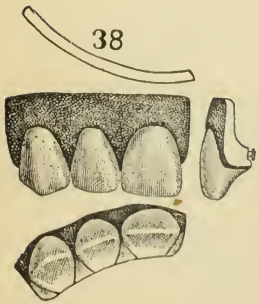


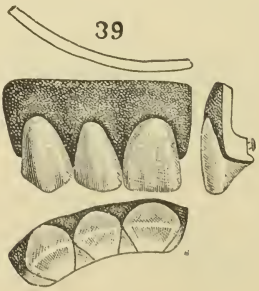












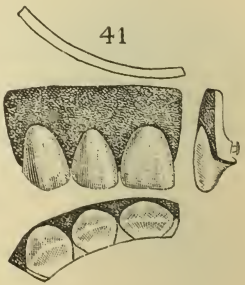
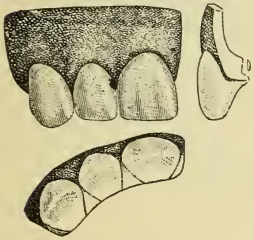


Chart of Gum Sections, Upper, Sets of 14.—Continued.

Order any make of teeth from these illustrations.

43



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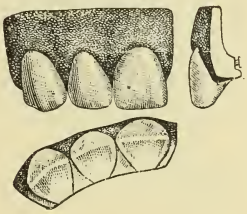

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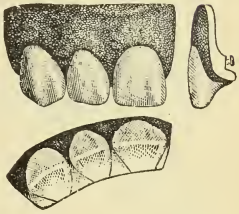

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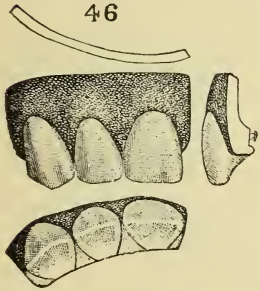

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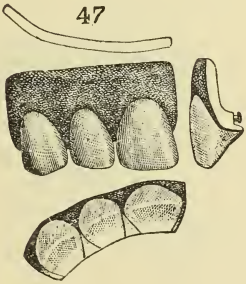

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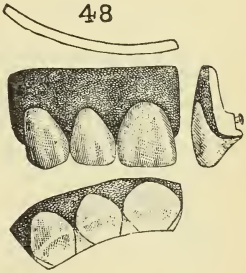

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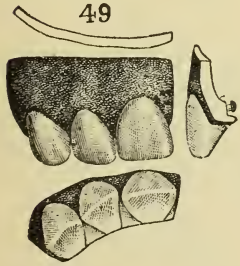

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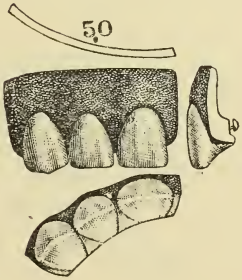

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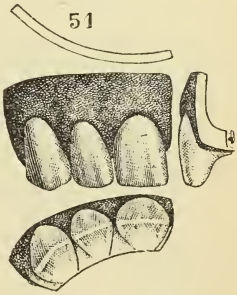

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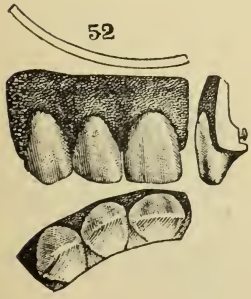

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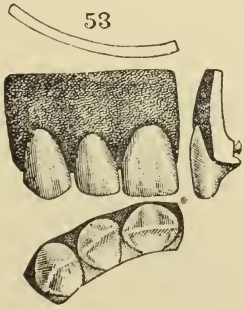

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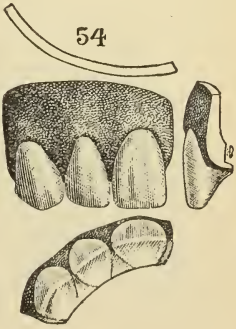

Chart of Gum Sections, Upper, Sets of 14.—Continued.

Order any make of teeth from these illustrations.

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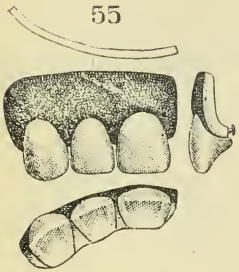

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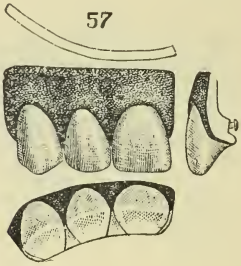

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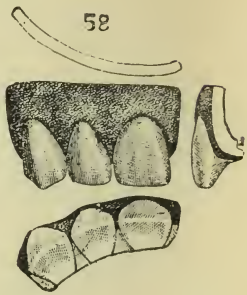

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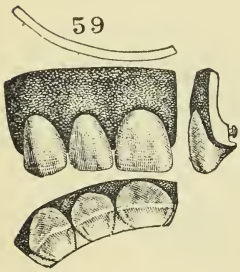

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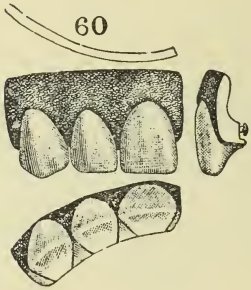

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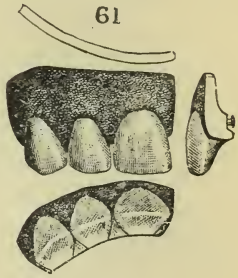

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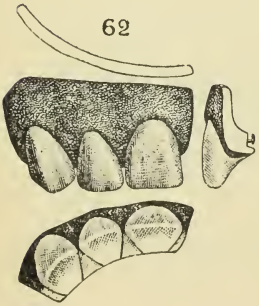

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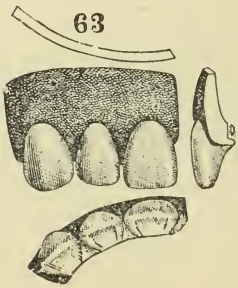

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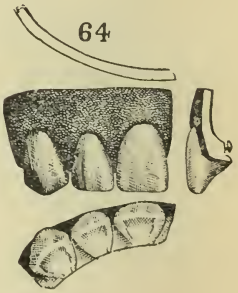

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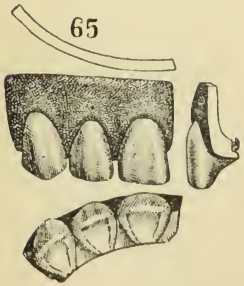

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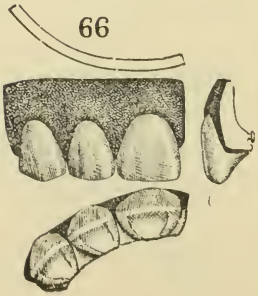

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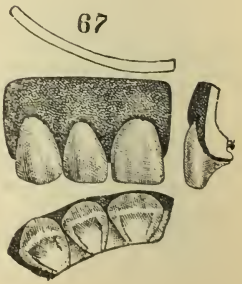
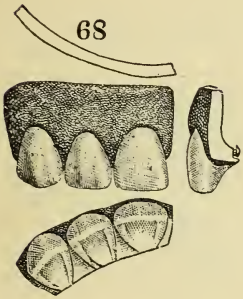
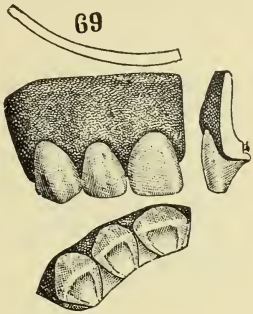
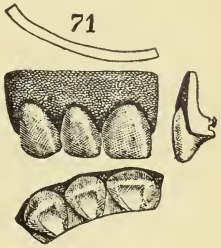


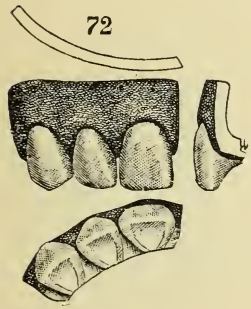
Chart of Gum Sections, Upper, Sets of 14.—Continued.

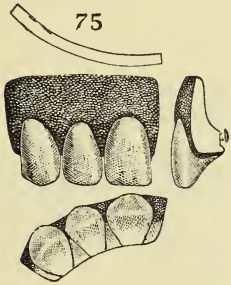
Order any make of teeth from these illustrations.

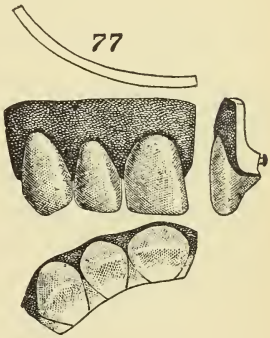


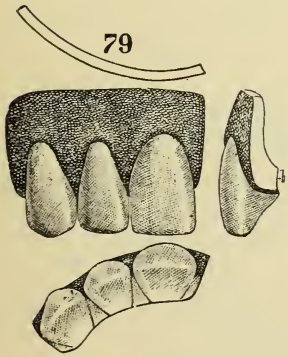


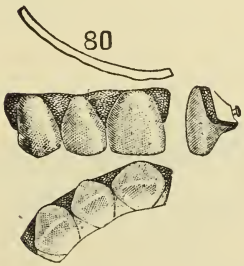


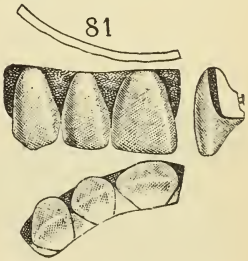


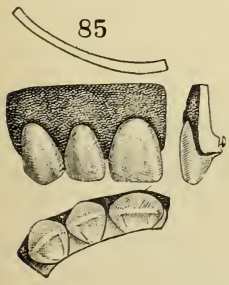


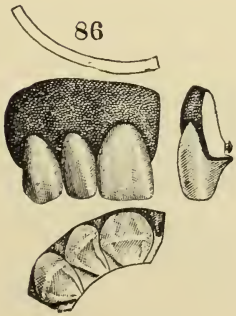












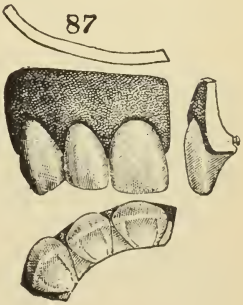
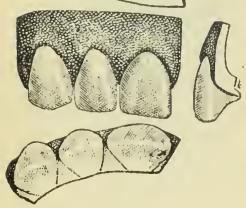


Chart of Gum Sections, Upper, Sets of 14.—Continued.

Order any make of teeth from these illustrations.

89



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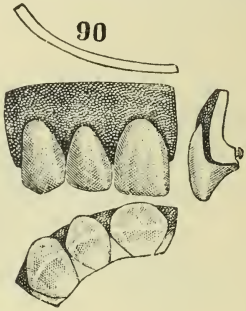

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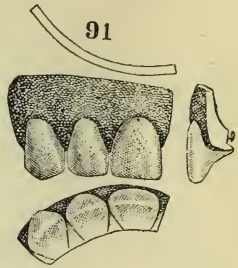

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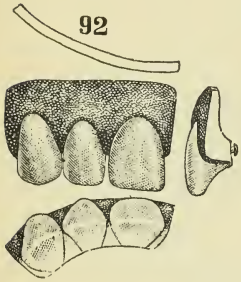

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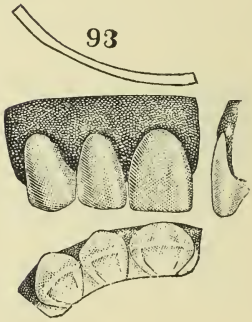

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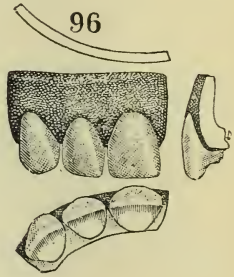

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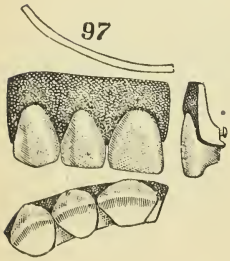

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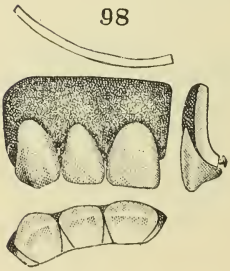

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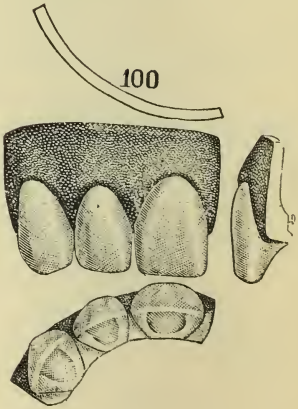

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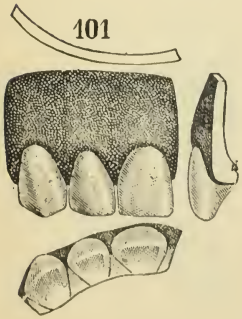

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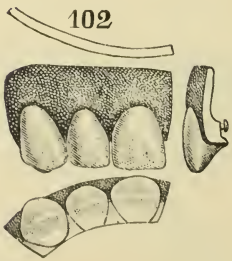

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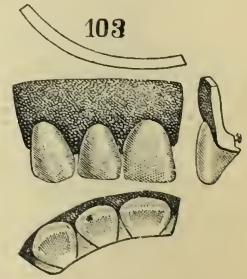
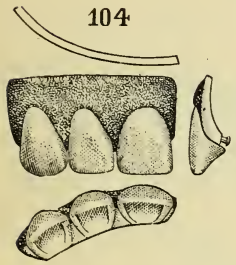


Chart of Gum Sections, Upper, Sets of 14.—Continued.

Order any make of teeth from these illustrations.

104



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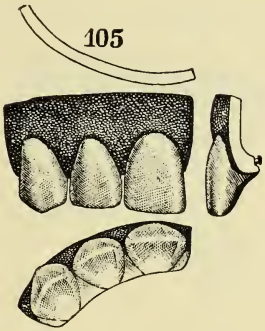

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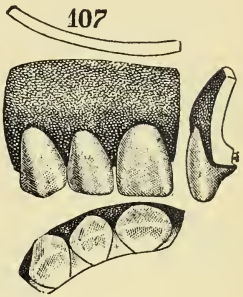

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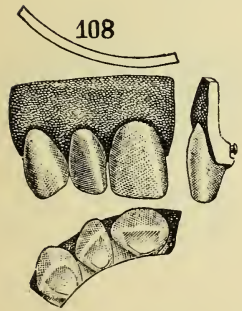

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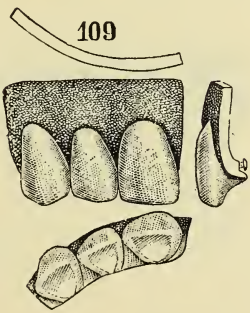

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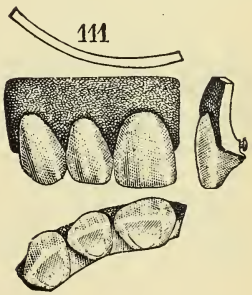

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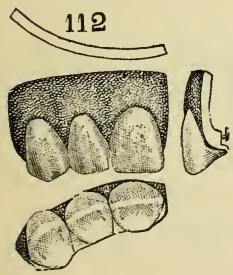

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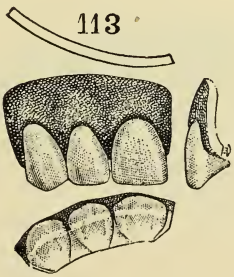

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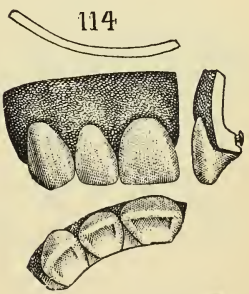

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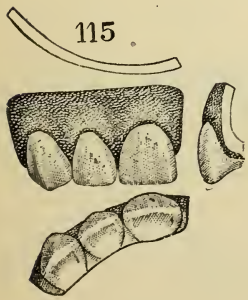

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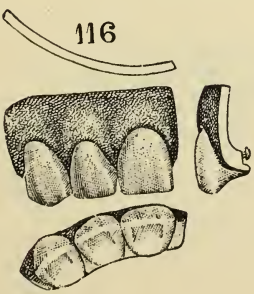

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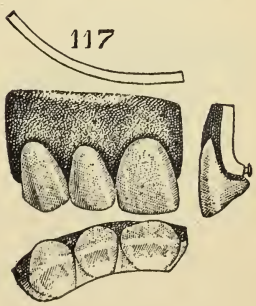
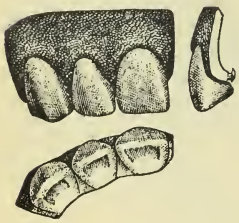


Chart of Gum Sections, Upper, Sets of 14.—Continued.

Order any make of teeth from these illustrations.

118



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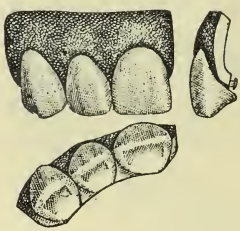

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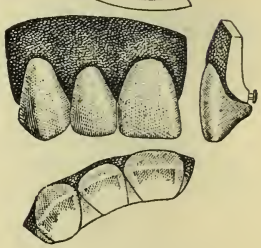

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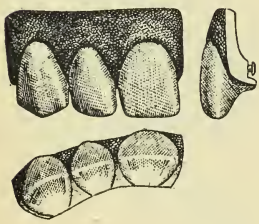

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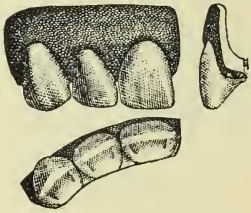

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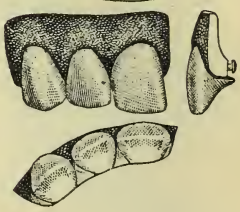

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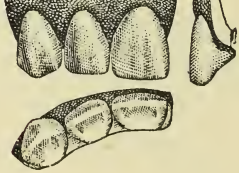

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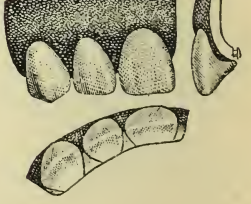

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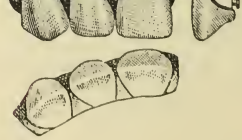
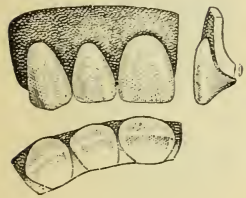


131

Chart of Gum Sections, Upper, Sets of 14.—Continued.

Order any make of teeth from these illustrations.

132



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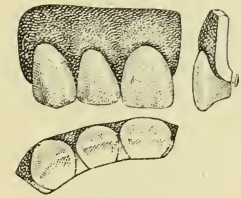

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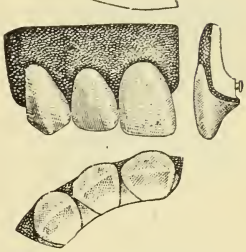

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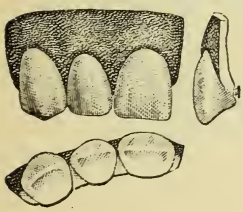

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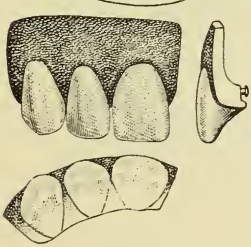

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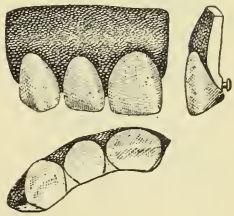

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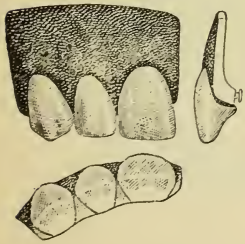

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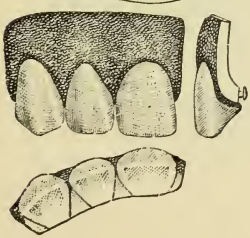

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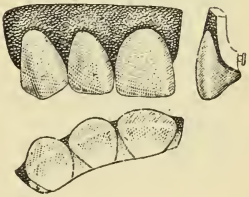

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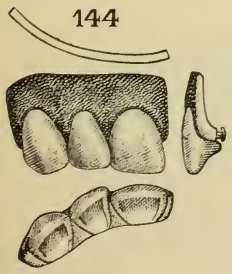

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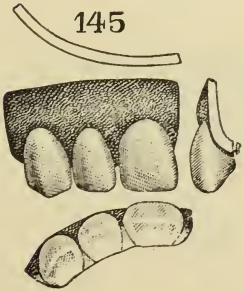

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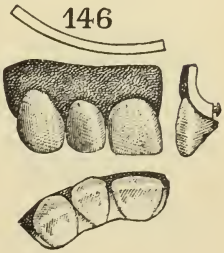
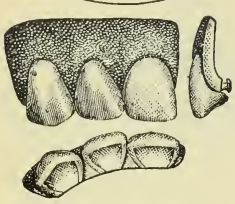


Chart of Gum Sections, Upper, Sets of 14.—Continued.

Order any make of teeth from these illustrations.

147



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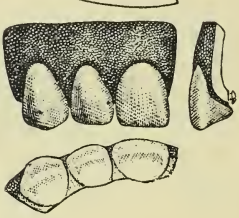

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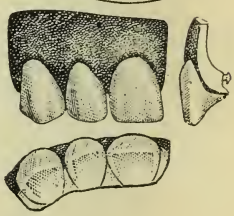

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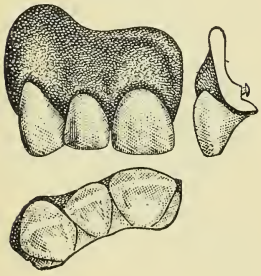

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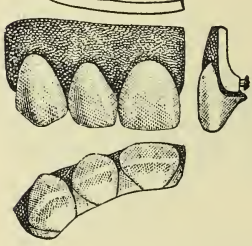

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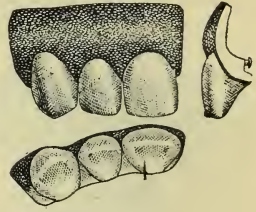

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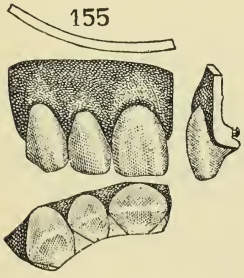

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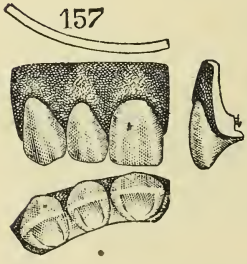

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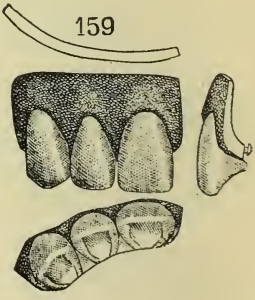

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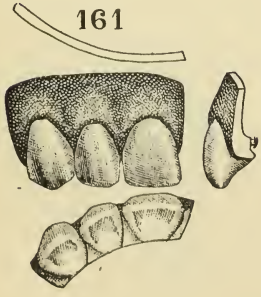

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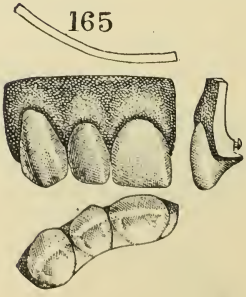

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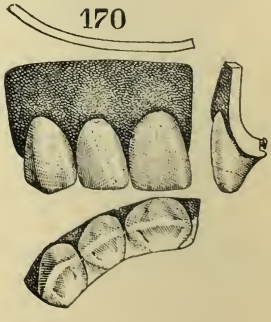
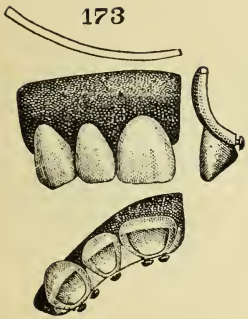


Chart of Gum Sections, Upper, Sets of 14.—Continued.

Order any make of teeth from these illustrations.

173



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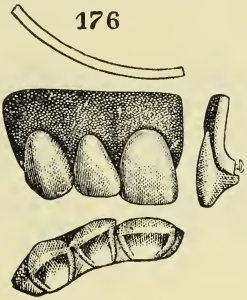

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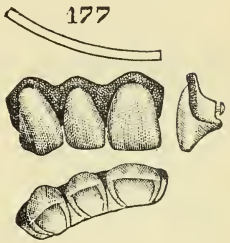

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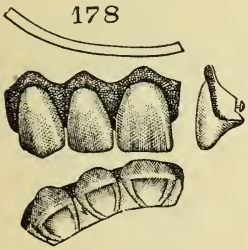

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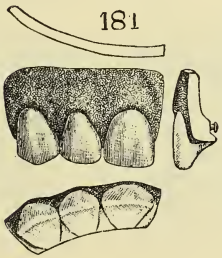

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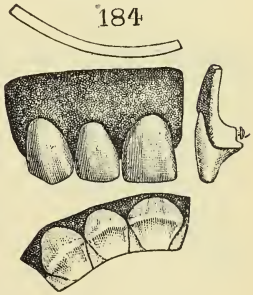

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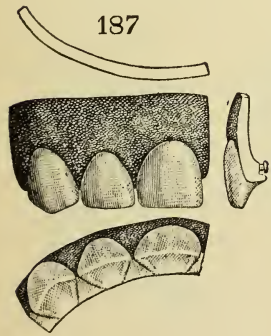

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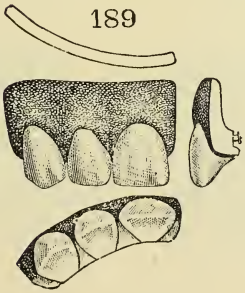

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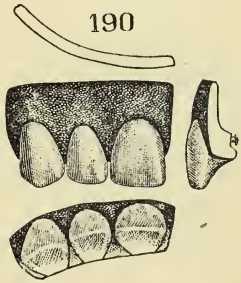
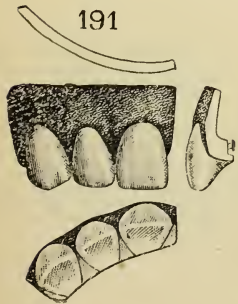


191



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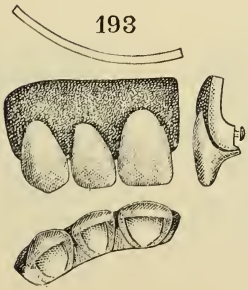


194

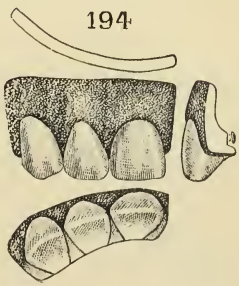
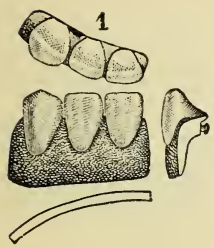


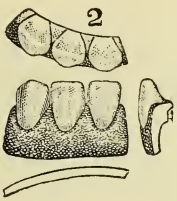
Chart of Gum Sections, Upper, Sets of 14.—Continued.

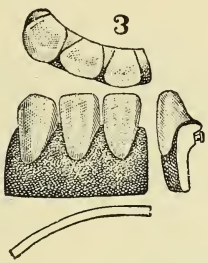
Order any make of teeth from these illustrations.

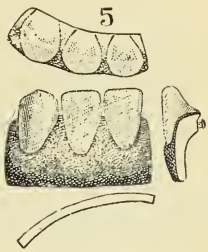
Chart of Gum Sections, Lower, Sets of 14.

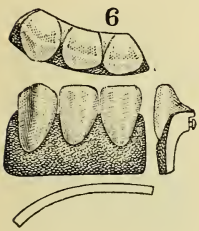
Order any make of teeth from these illustrations.

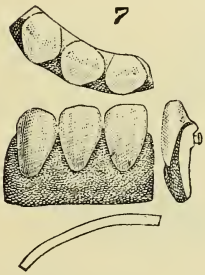


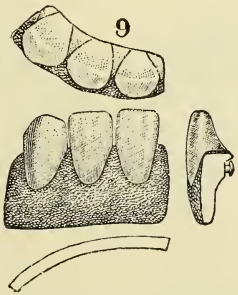


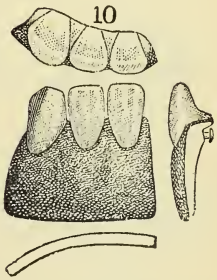


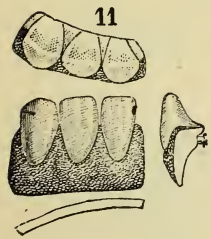


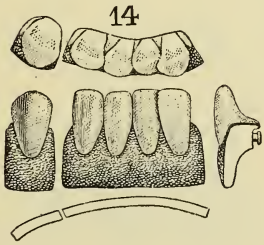


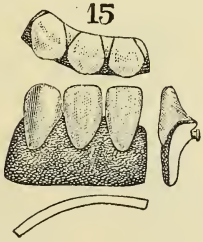


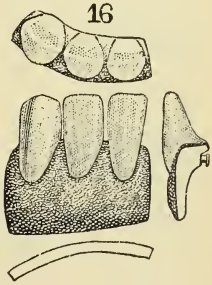


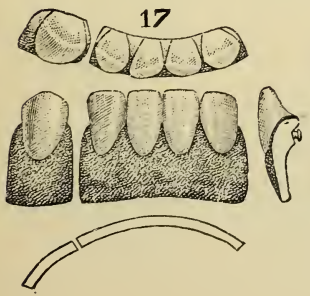


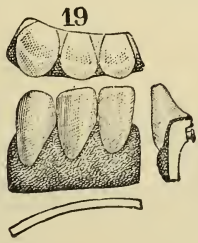


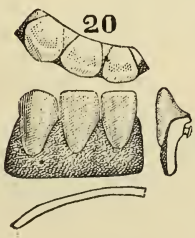












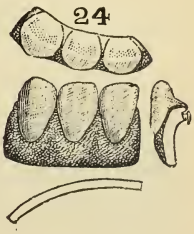
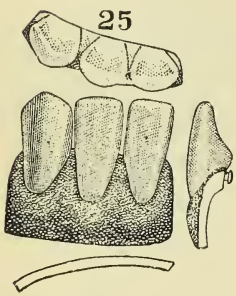
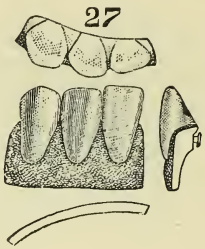
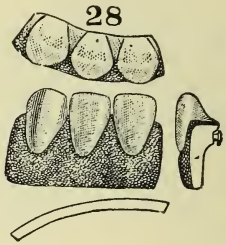


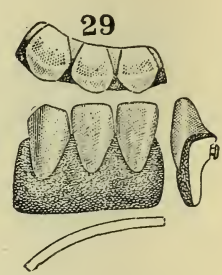
Chart of Gum Sections, Lower, Sets of 14.—Continued.

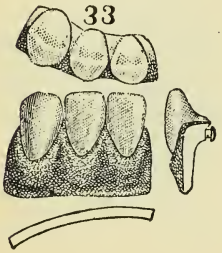
Order any make of teeth from these illustrations.

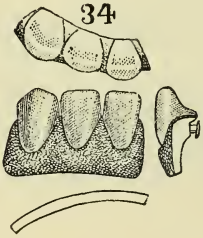


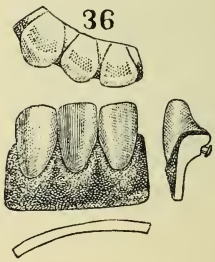


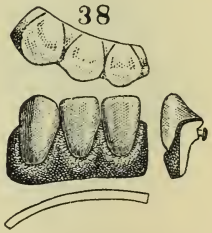


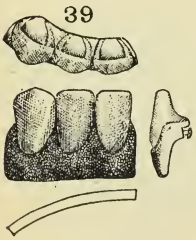


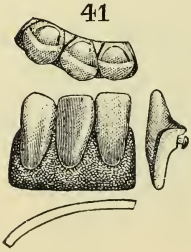


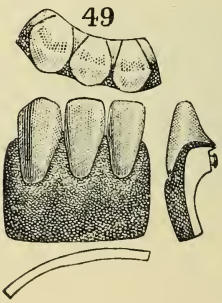


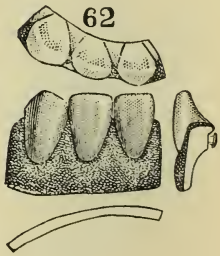


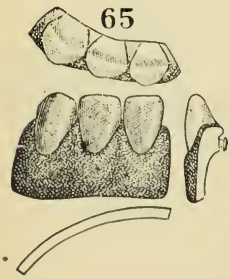


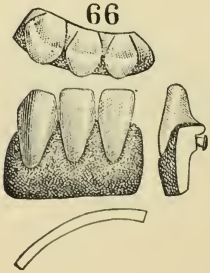


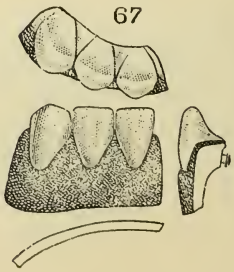












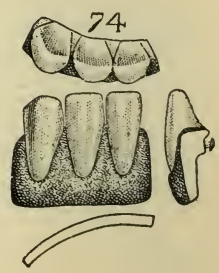


Chart of Gum Sections, Partial

Order any make of teeth from these illustrations.

Upper, Sets of 4, in Two Sections.

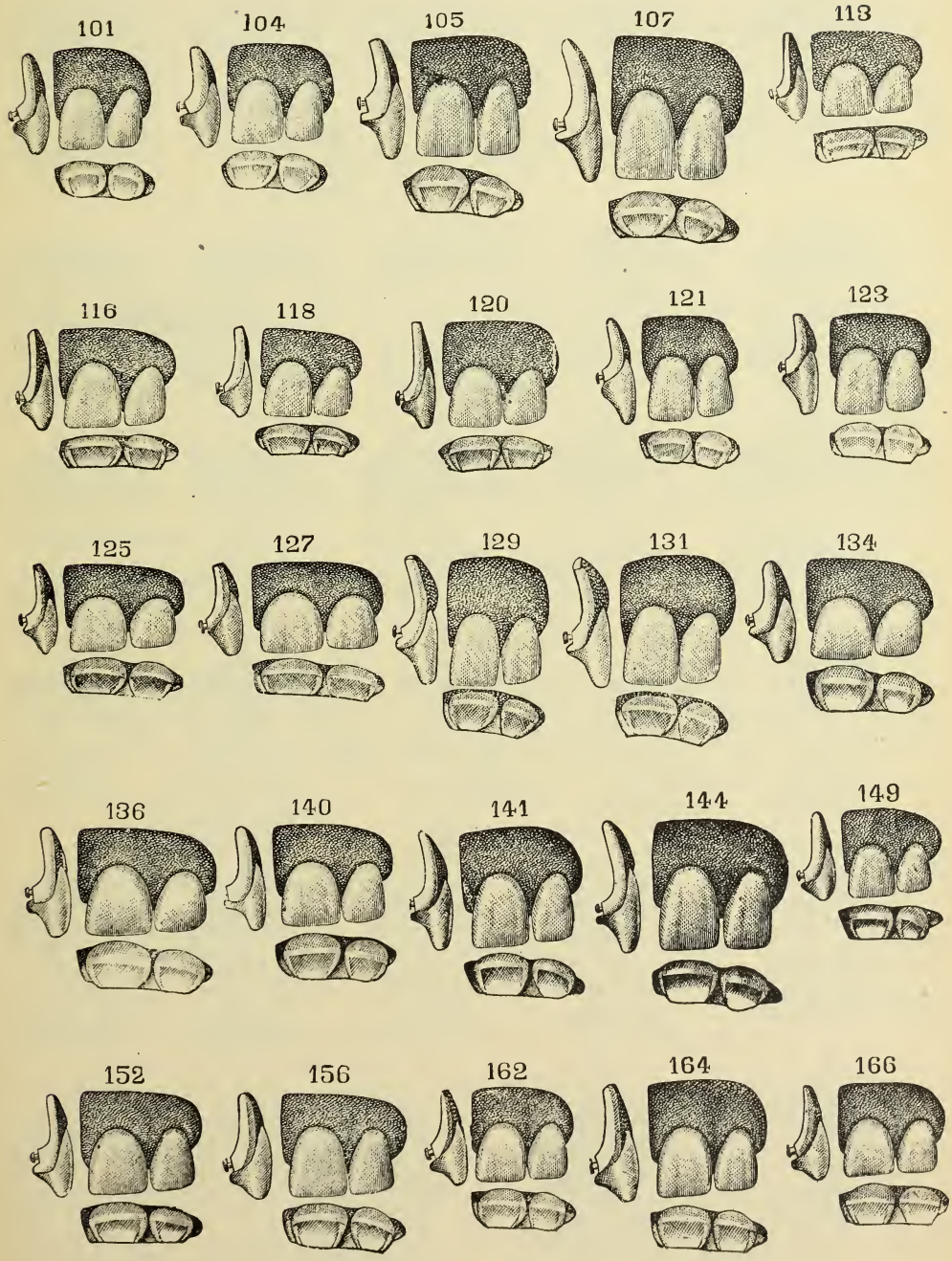


Chart of Gum Sections, Partial.—Continued.

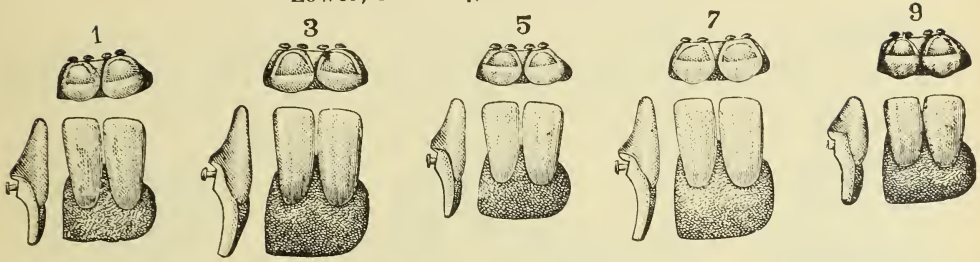
Order any make of teeth from these illustrations.

Upper, Sets of 4, in Two Sections.

Chart of Gum Sections, Partial.—Continued.

Order any make of teeth from these illustrations.

Lower, Sets of 4, in Two Sections.



Upper, Sets of 4, in One Section.

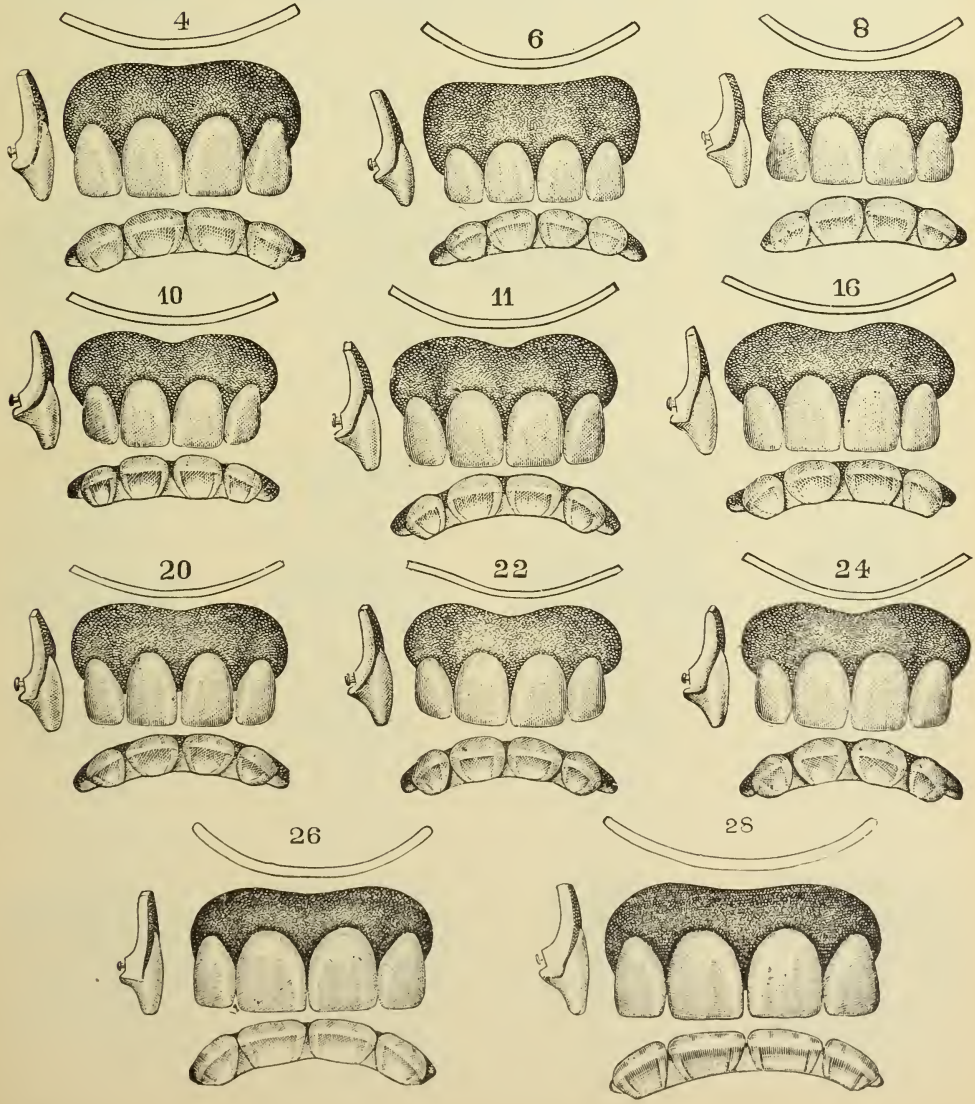
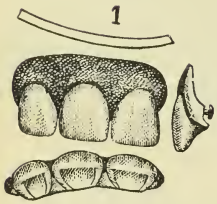
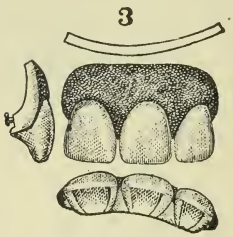


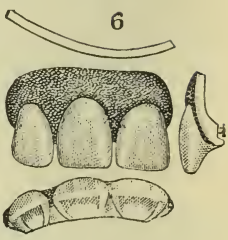
Chart of Gum Sections, Partial.—Continued.

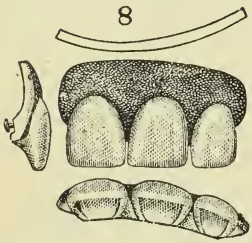
Order any make of teeth from these illustrations.

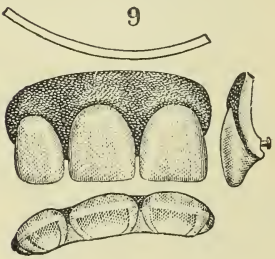
Upper, Sets of 3, Centrals and Lateral, in One Section.

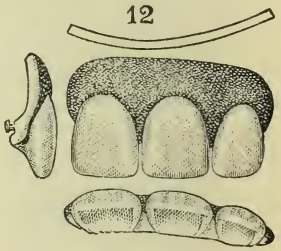




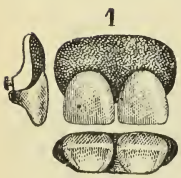


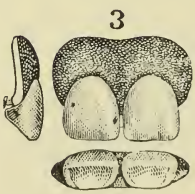


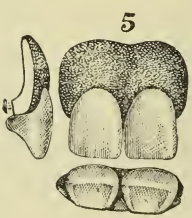


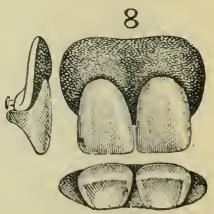


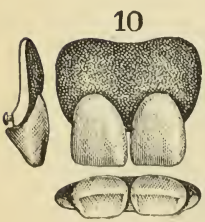
Upper, Sets of 2, in One Section.











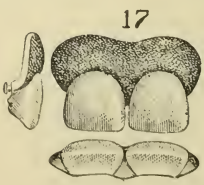
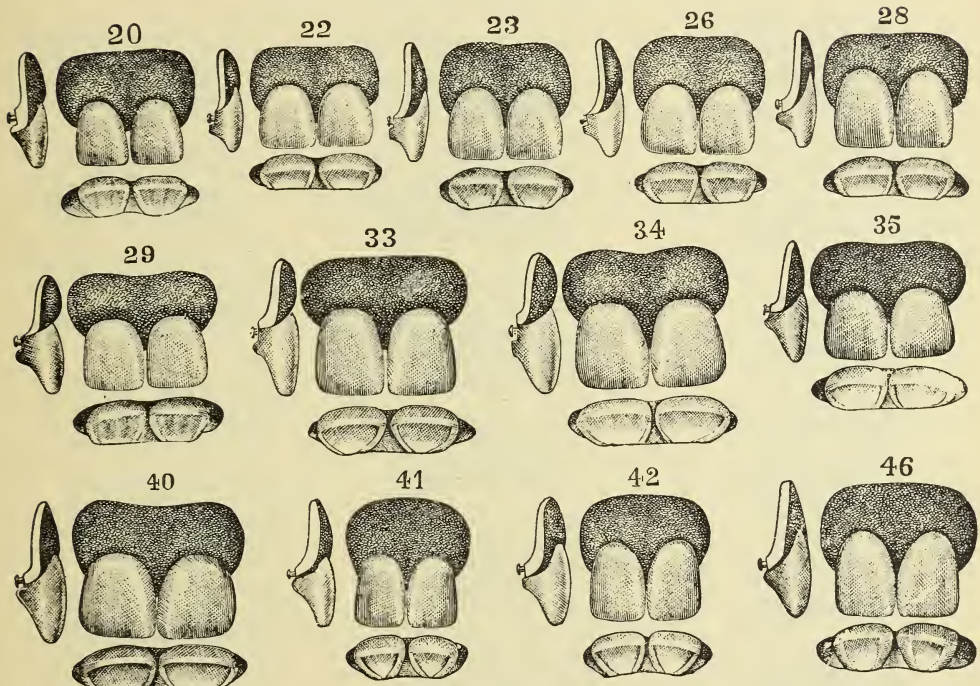


Chart of Gum Sections, Partial.—Continued.

Order any make of teeth from these illustrations.

Upper, Sets of Two, in One Section.



Upper, Sets of 4, (Bicuspids with Single Cusp), in Two Sections.

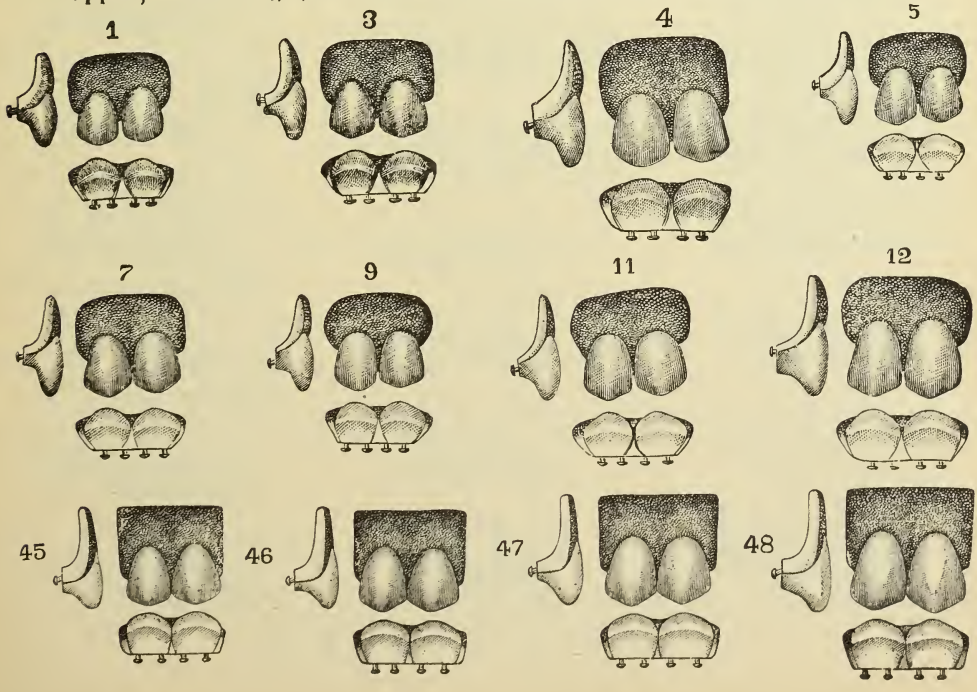


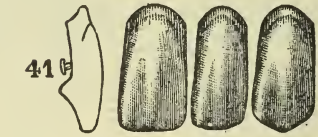
Chart of Plain Teeth for Rubber Work.

Order any make of teeth from these illustrations.

Upper, Incisors and Cuspid.

Each Cut represents the Half of a Set of Six.

The above cuts show the approximal, labial, and lingual faces of a Superior Rubber Central; the side views giving the position of the headed pins, the length of *bite* and of the *ridge*, and the curve of the labial face.



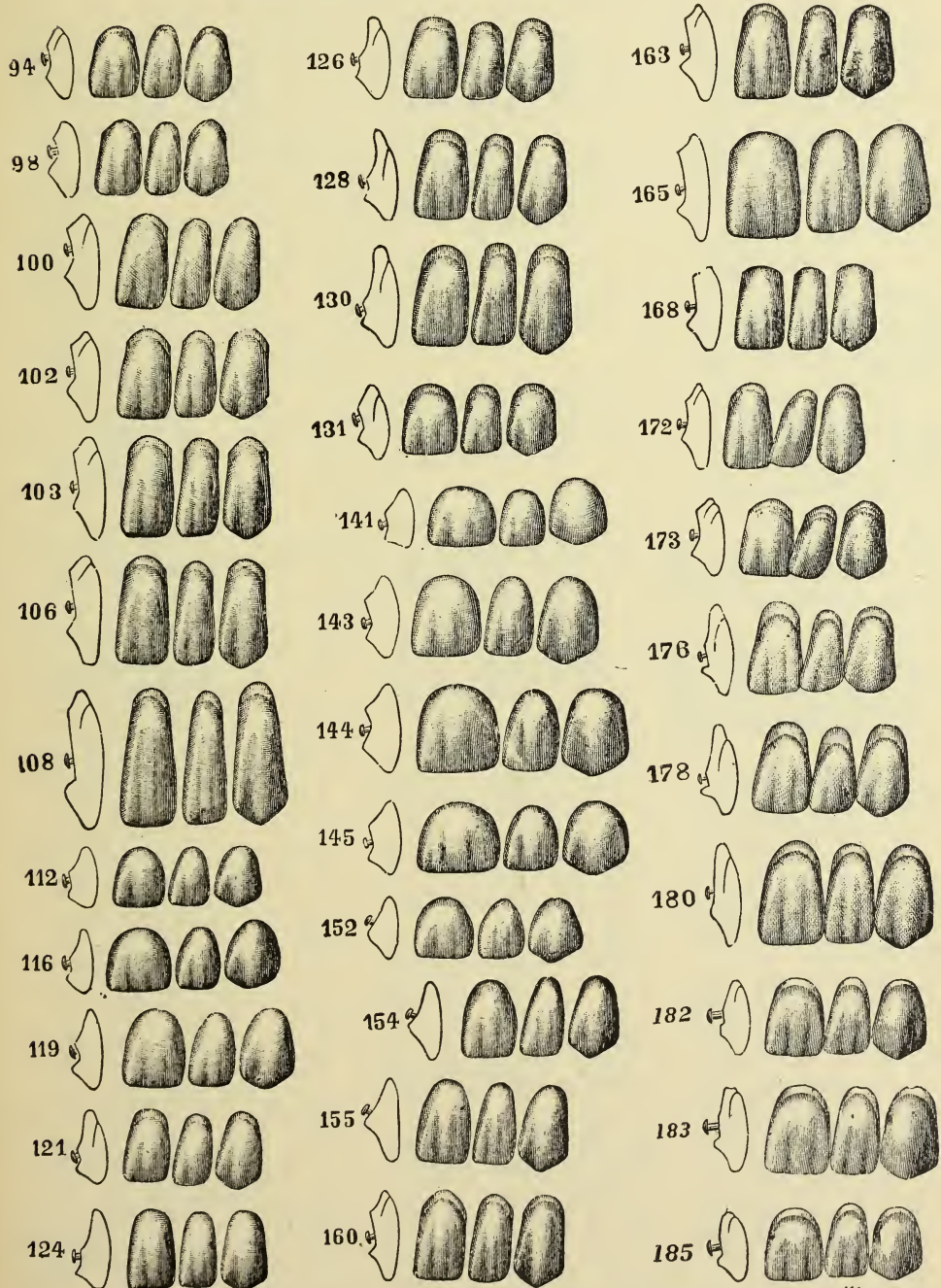
Plain plate and bridge teeth may be ordered from above. The moulds shown will convey a general idea as to size and form desired.

Chart of Plain Teeth for Rubber Work.—Continued.

Order any make of teeth from these illustrations.

Upper, Incisors and Cuspid.

Each Cut represents the Half of a Set of Six.



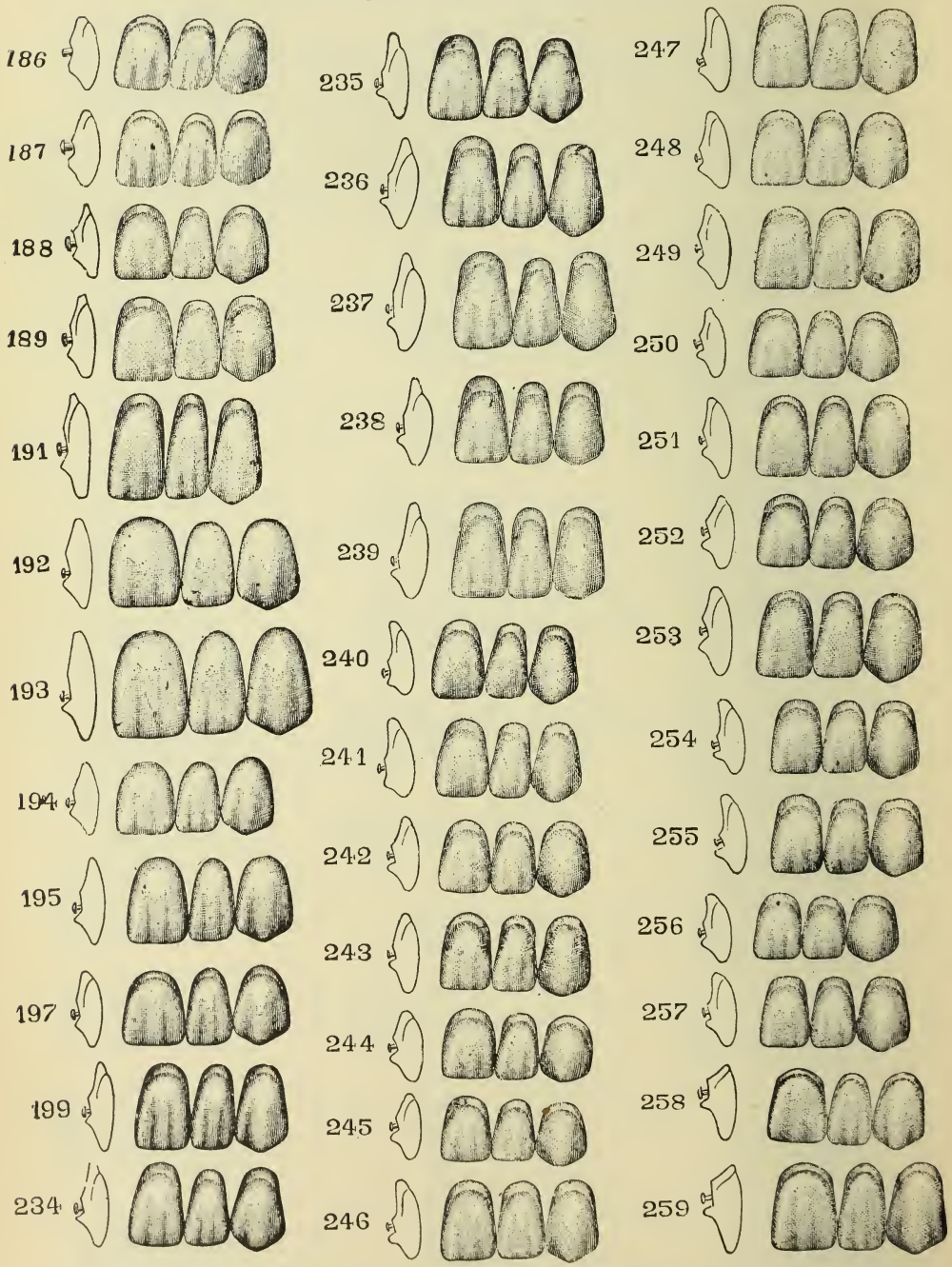
Plain plate and bridge teeth may be ordered from above. The moulds shown will convey a general idea as to size and form desired.

Chart of Plain Teeth for Rubber Work.—Continued.

Order any make of teeth from these illustrations.

Upper, Incisors and Cuspid.

Each Cut represents the Half of a Set of Six.



Plain plate and bridge teeth may be ordered from above. The moulds shown will convey a general idea as to size and form desired.

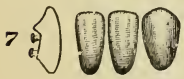
Chart of Plain Teeth for Rubber Work.--Continued.

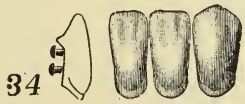
Order any make of teeth from these illustrations.

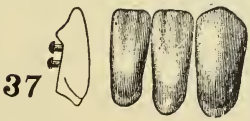
Lower, Incisors and Cuspid.

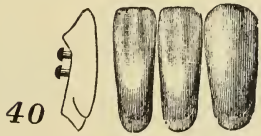
Each Cut represents the Half of a Set of Six.

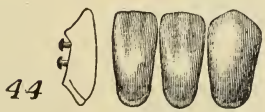
The above cuts show the approximal, labial, and lingual faces of an Inferior Rubber Central; the side view giving the position of the headed pins, the length of *bite* and of the *ridge*, and the curve of the labial face.











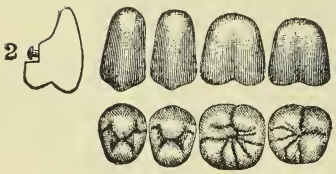
Plain plate and bridge teeth may be ordered from above. The moulds shown will convey a general idea as to size and form desired.

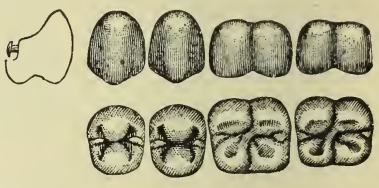
Chart of Plain Teeth for Rubber Work.—Continued.

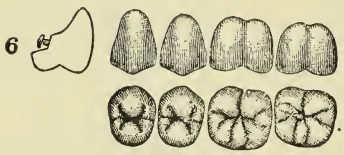
Order any make of teeth from these illustrations.

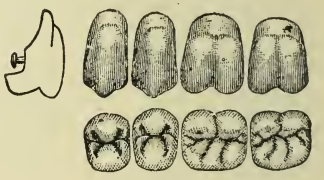
Upper, Bicuspids and Molars.

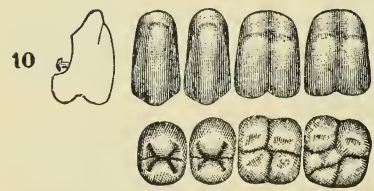
Each Cut represents the Half of a Set of Eight.

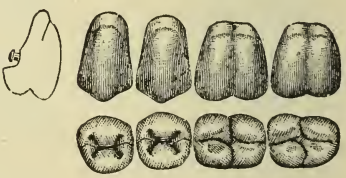


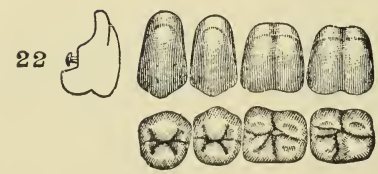












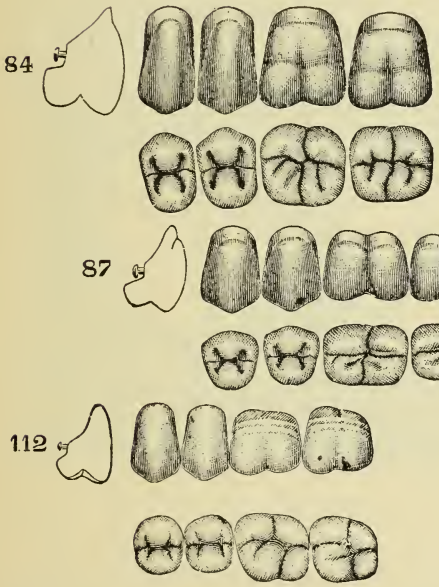
Plain plate and bridge teeth may be ordered from above. The moulds shown will convey a general idea as to size and form desired.

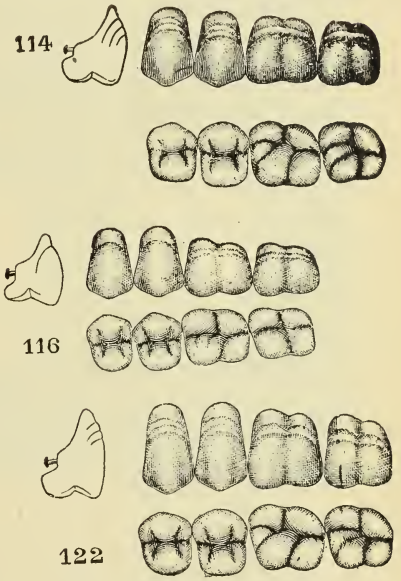
Chart of Plain Teeth for Rubber Work.—Continued.

Order any make of teeth from these illustrations.

Upper, Bicuspids and Molars.

Each Cut represents the Half of a Set of Eight.

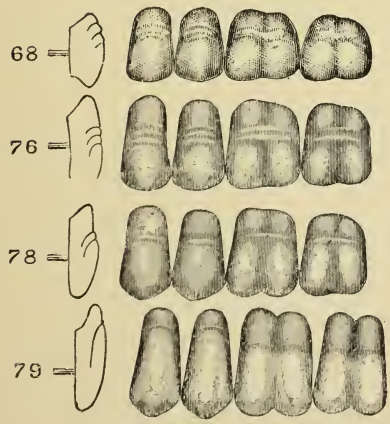


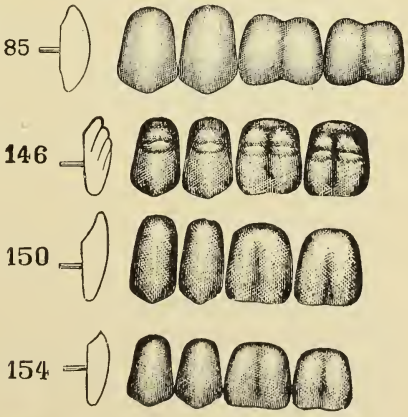


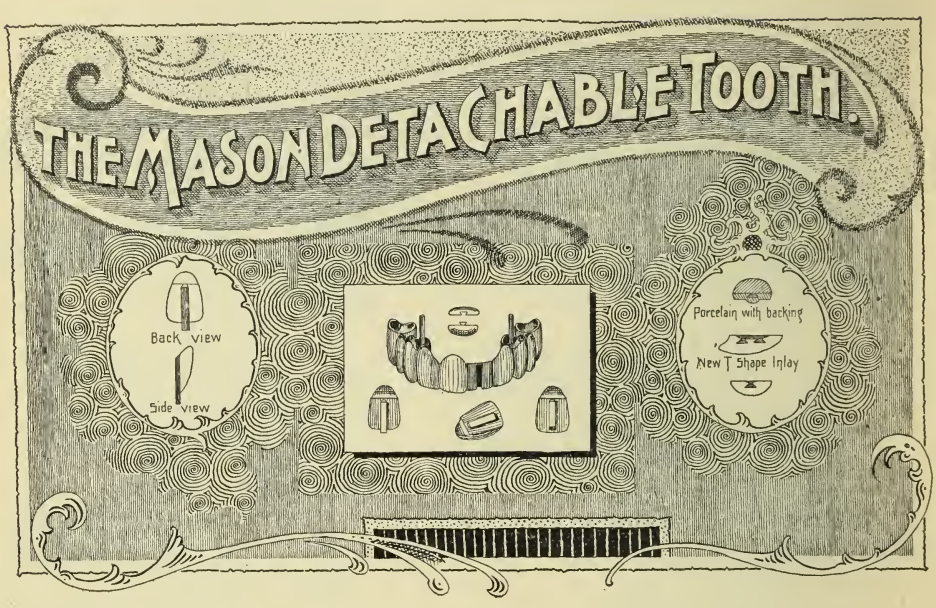
Plain plate and bridge teeth may be ordered from above. The moulds shown will convey a general idea as to size and form desired.

Chart of Crowns.

Veneers or Facings for Bridge Work.







A Detachable tooth is what hundreds of dentists were endeavoring to invent for years.

It was known that the only way to rid crown and bridge work of its difficulties and imperfections was by some method in which the porcelains would not be subjected to heat, and repairs could be made without removing the bridge from the patient's mouth.

The detachable tooth was conceded to be this method.

In extreme cases, when specially good results were to be obtained, dentists made detachable teeth, but at great expense.

Since the advent of the Mason Detachable Tooth, crowns and bridge work have been placed upon a sound and sure basis.

As the porcelains are not heated, they cannot check or go off shade.

Each and every porcelain can be easily slipped on and off the bridge while in the patient's mouth. They won't budge until you want them budged, then it is easy and simple to do it.

Any good dentist can do good work with the Mason Detachable Tooth. It is not a radical departure from the old way in the sense that a dentist must unlearn that which he already knows.

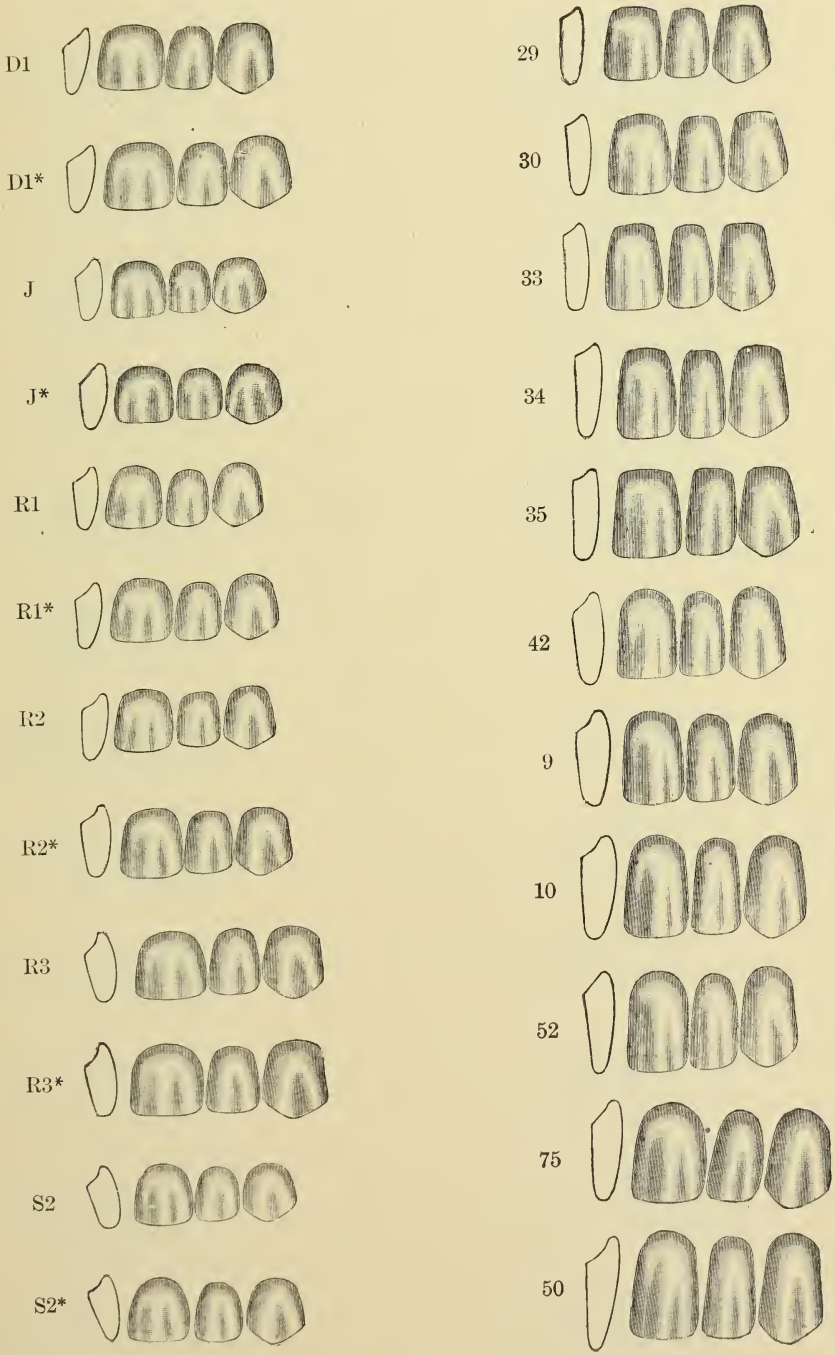
The Mason method is more simple, if anything.

The same tools and the same knowledge are all that's needed. It's less trouble, sure in results, less expensive, pleases patients, and makes better workmanship possible.

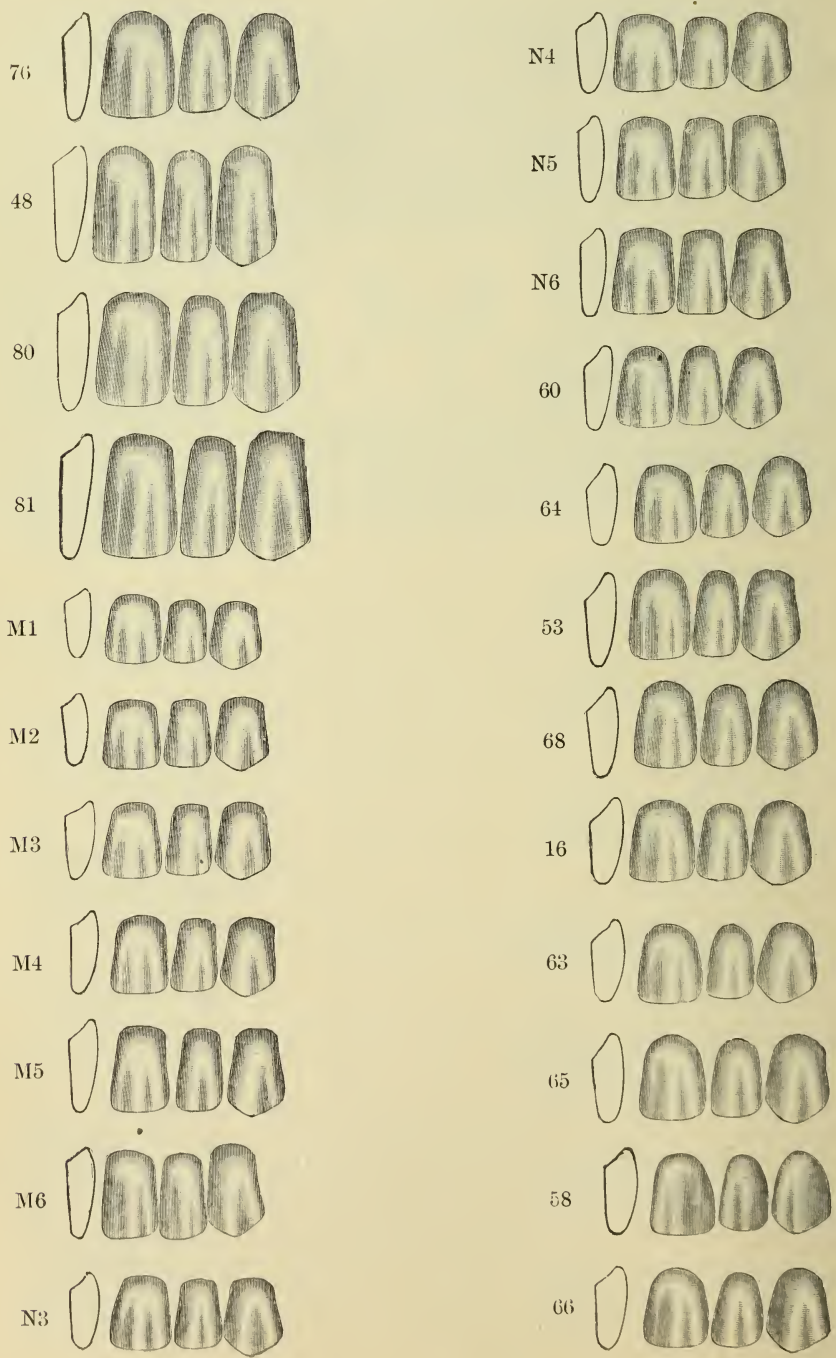
No dentist who values his time, wants to make money, or is anxious to do the very best work, can afford not to use the Mason Detachable Teeth.

Illustrated Catalogue and little booklet free, for the asking.

Mason's Detachable Porcelains.



Mason's Detachable Porcelains.—Continued.



Mason's Detachable Porcelains.—Continued.

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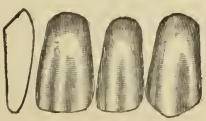
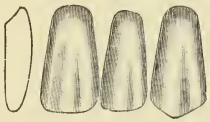
93 

89 

Lowers.

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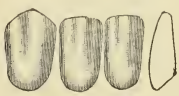
J

J1

J2

B4

20 

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Mason's Detachable Porcelains.—Continued.

Lowers.

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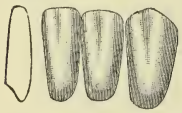
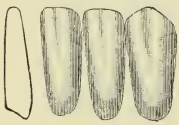
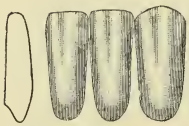
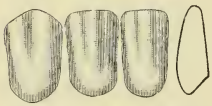
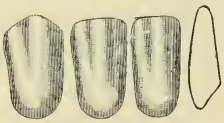
A 

I 

7 

44 

46 

B. & M. Facings.

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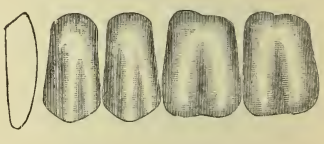
22 

Saddle Backs.

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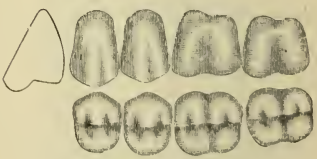
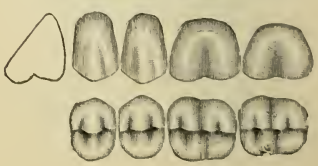
12 

4 

Mason's Detachable Porcelains.

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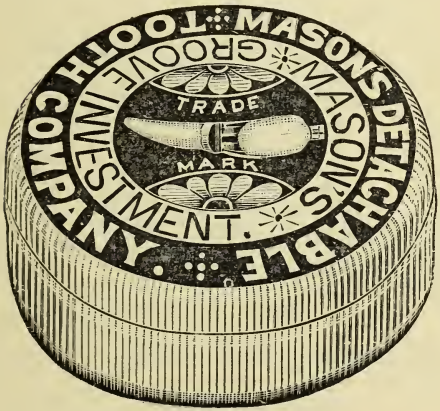
Mason's facings, each $0 50



A GOOD THING!

Have you tried

Mason's Stop-out Material

FOR

GENERAL LABORATORY WORK?

Sample free for the asking. **Price, 15c per box.**

It is indispensable to Dentists for preventing solder from entering where not needed. Absolutely unshrinkable and insures perfect manipulation of

Mason's Detachable Porcelains.

Prices.

Gold Backings.

75c. Class.

Nos. 1, 2, 5, 8, 9, 10, 11, 12, 24, 49, 52, 54, 57, 61, 63, 85, 86, 88.

$1.00 Class.

Nos. 3, 4, 6, 7, 13, 20, 21, 23, 37, 38, 39, 40, 41, 42, 50, 55, 56, 59, 81.

$1.25 Class.

Nos. 16, 18, 19, 22, 26, 27, 28, 43, 44, 46, 53, 60, 62, 71, 74, 83, 84.

$1.50 Class.

Nos. 17, 29, 30, 31, 32, 33, 36, 45, 47, 48, 75.

$1.75 Class.

Nos. 34, 35, 72, 90, 92.

Matinum Backings.

35c Class.

Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 19, 20, 22, 23, 24, 37, 38, 39, 40, 41, 49, 50, 54, 55, 56, 57, 59, 60, 61, 63, 81, 85, 86, 88, 52.

50c Class.

Nos. 16, 17, 18, 21, 27, 28, 29, 30, 31, 32, 33, 36, 42, 43, 44, 45, 46, 47, 48, 53, 62, 71, 73, 74, 75, 83, 84.

60c Class.

Nos. 34, 35, 72, 90, 92.

Tools which Facilitate the Working of Mason Detachable Teeth.

Fig. 1, shows a fine three-cornered file for reducing size of dovetail when necessary —See Fig. B B.

Fig. 2, shows a Barrett file, used for enlarging the opening of groove in backing—See Fig. A A.

Fig. 3, shows a fine three-cornered file for making the opening in cusps—See Fig. 7.

Fig. 10 shows Anvil for straightening backings that may become warped in soldering.

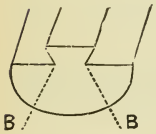


Fig. B B.

Fig. 1.

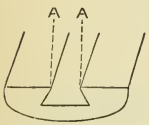


Fig. A A.

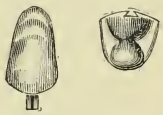


Fig. 7.

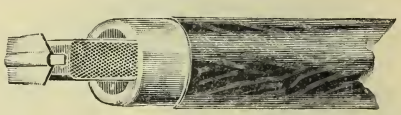


Fig. 10.

Fig. 2.

Fig. 3.

Plyers No. 1, are for holding backing—See Fig. 8.

Plyers No. 2, showing cross section at jaws, gives a ready means of removing dovetail and inlay from backing, without injury to any part of bridge or crown—See Fig. 9.

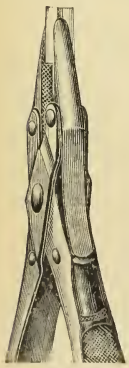


Fig. 8.

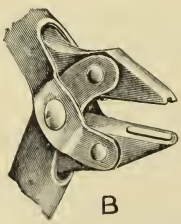


Fig. B.

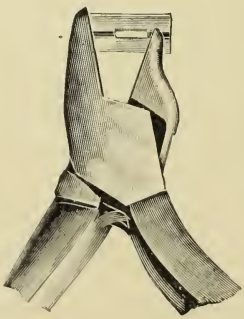


Fig. 9.

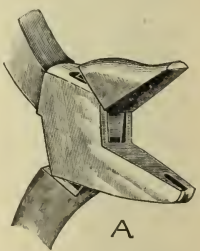


Fig. A

While no special tools are necessary for doing crown and bridge work by the Mason method, we recommend these files and plyers, which will greatly facilitate the work. You will also find these tools very useful in your general laboratory work.

Minutes Instead of Hours.

If for no other reason, the ease with which repairs are made to crown and bridge work should be sufficient inducement for a dentist to adopt the Mason method.

You know the trouble you have to contend with in the old method.

It's just this way.

A porcelain breaks in a patient's mouth, and he comes to you to have it repaired.

You take out the bridge, attach a new porcelain and fasten the bridge in the patient's mouth again. Perhaps it takes you three hours, perhaps a day.

You have had a lot of bother, wasted your time and caused your patient pain.

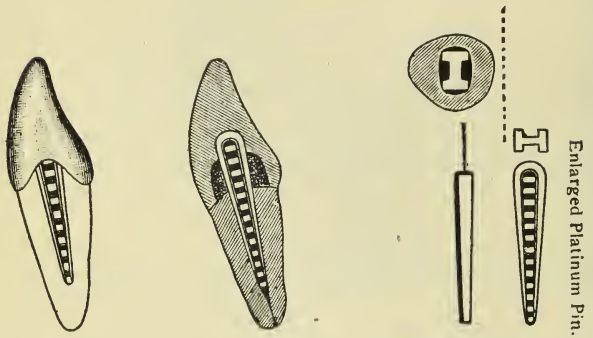
The Mason method is just the reverse of all this. It takes minutes where the old method takes hours.

A broken porcelain can be removed and another porcelain put on in fifteen to thirty minutes.

You do not have to disturb the bridge, nor do you cause the least pain to your patient. You save yourself annoyance, and you save your time.

If you are not familiar with the Mason system and will let us know, we will send you a little booklet that will explain it to you.

The Improved Logan Tooth Crown.



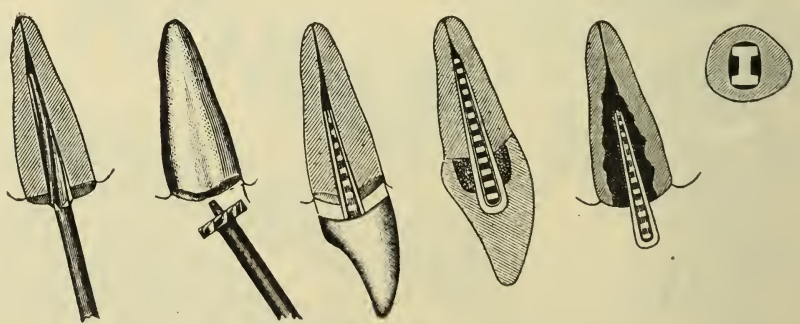
Cross-Section of a Central Incisor, showing the position of the pin in the root.

A good many people have tried to make a porcelain tooth crown to compete with the Logan crown, but no one has ever succeeded. The reason no one has ever succeeded is simply because the Logan crown can't be improved. It is easier to set the Logan crown than any other and when it is set, and set properly, it stays set.

Our stock of Logan crowns is one of the features of our tooth department. We make a specialty of them.

The crown is molded with the interior of the base around the pin hollowed out, so that when mounted the retaining material shall extend inside of the crown instead of forming a joint at its junction with the root, thus carrying the line upon which the leverage is exerted nearer to the point upon which the biting force is applied, and providing room for a considerable body of the retaining material instead of a thin disk as in ordinary crowns, reducing the liability to fracture to the minimum. The pin, in the incisors, cuspids, and bicuspids, is a stout, tapering double-T shaped platinum post, which extends outside of the crown three-eighths of an inch. It can be split, for two rooted bicuspids, or shortened when necessary. The molars are made with two square pins, grooved on all four sides. One of these is for the palatal root, the other for either of the buccal roots, as may be most convenient. The posts can be filed smaller for special cases, or nicked if desired to afford a stronger hold in the retaining material, though this will usually be unnecessary, as their shape was designed specially to give the strongest hold possible.

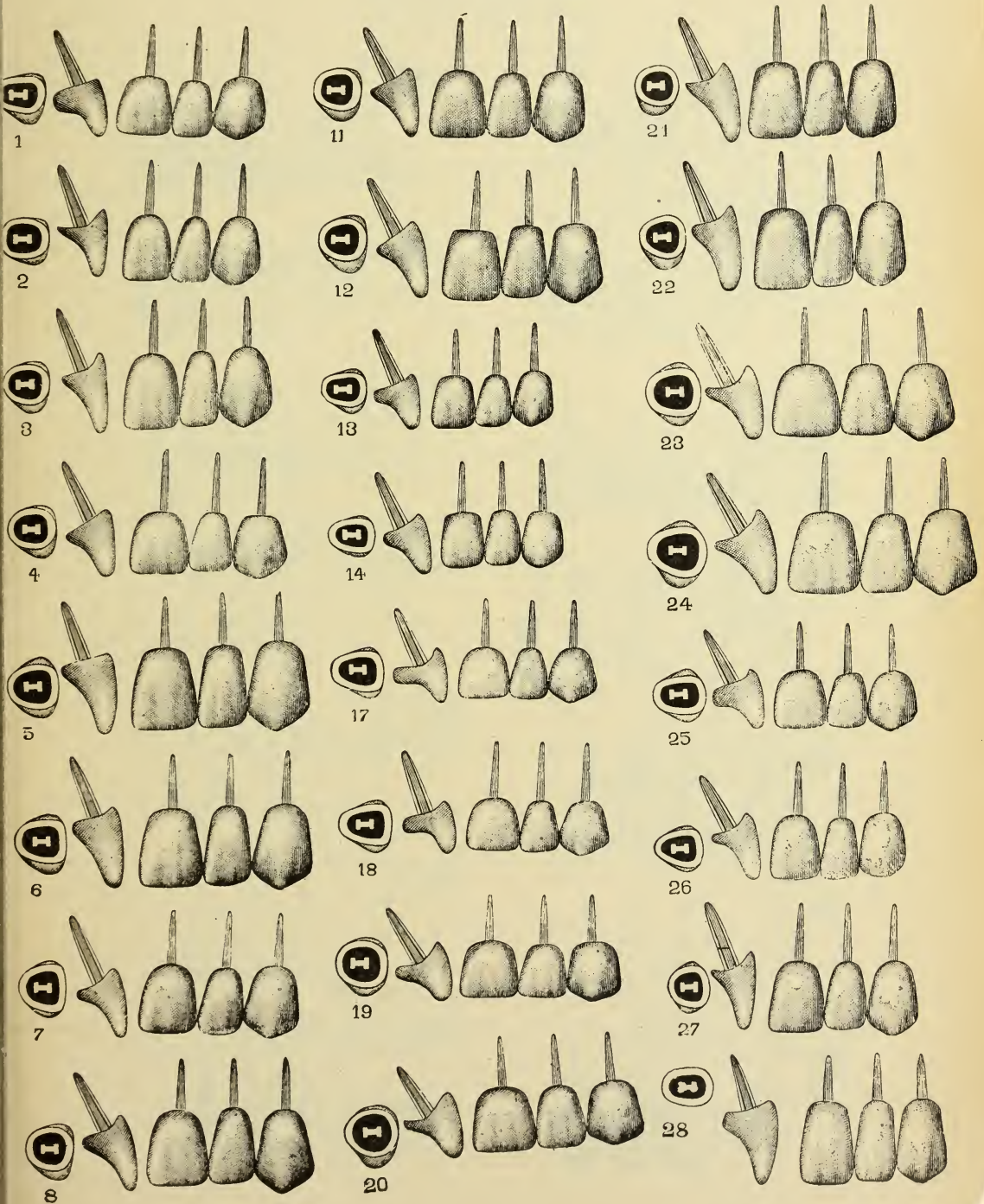
Dr. Ottolengui's Method of Mounting the Logan Crown.



The canal of the root to be crowned is opened up to the proper depth with a twist drill, and then with a root-reamer, corresponding to the size of the pin, is enlarged to fit the pin along its whole length, and so hold the crown firmly independently of the cement. With a root-facer a labial slope is given to the root-end, so that the crown neck shall fit under the edge of the gum. The cuts show the method and its result, and the cross-section shows how the cement encases the pin.

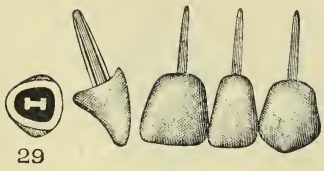
Logan Crowns.

Upper, Incisors and Cuspids.



Logan Crowns.—Continued.

Upper, Incisors and Cuspids.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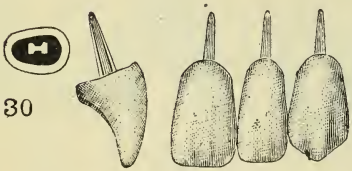
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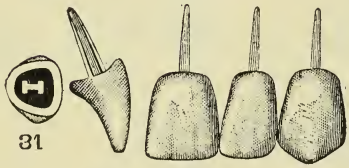
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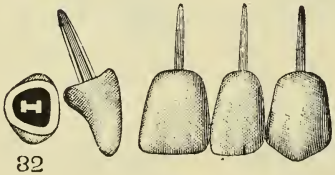
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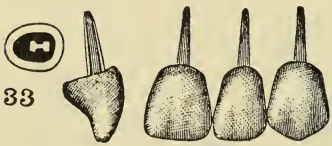
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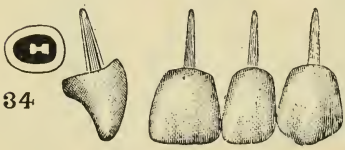
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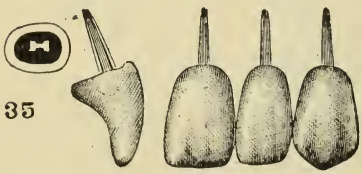
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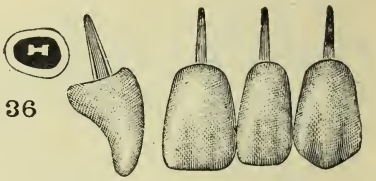
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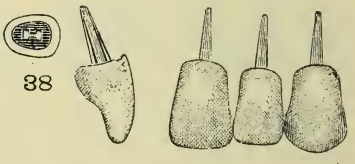
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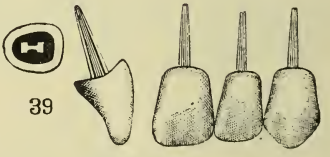
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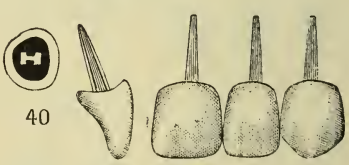
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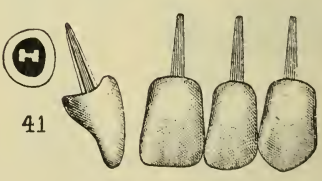
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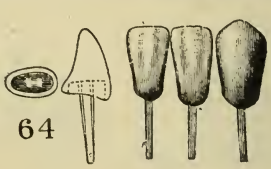
Lower, Incisors and Cuspids.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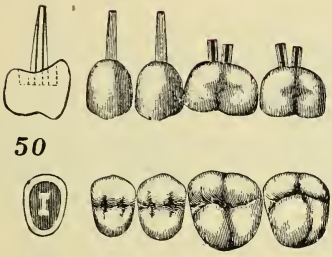
Logan Crowns.—Continued.

Upper, Bicuspids and Molars.



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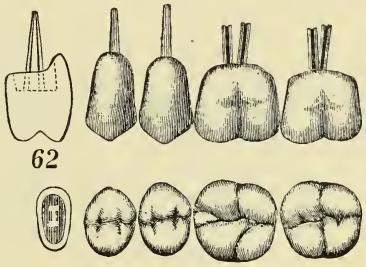

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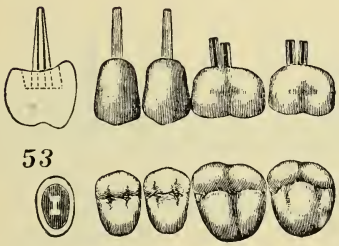

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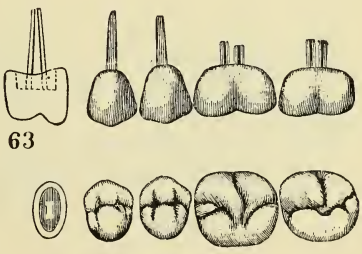

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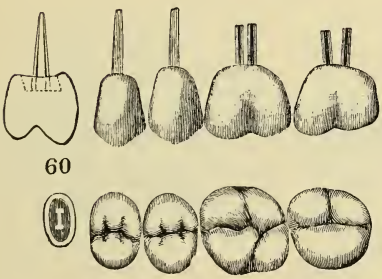

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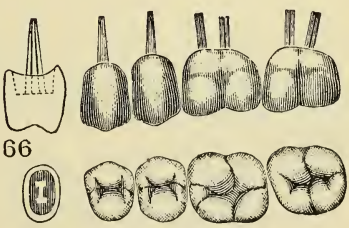

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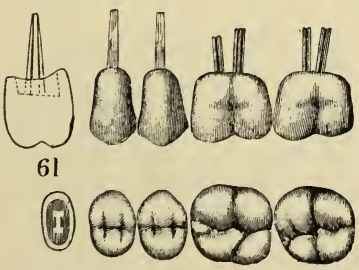

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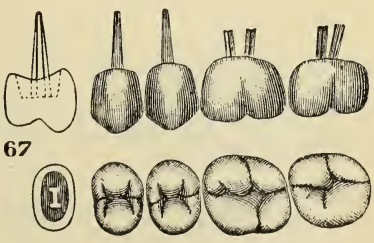

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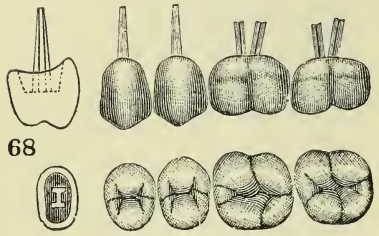
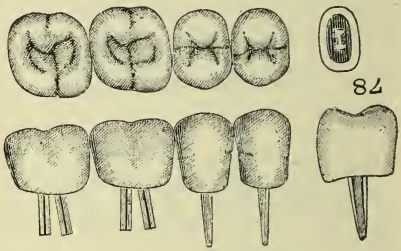
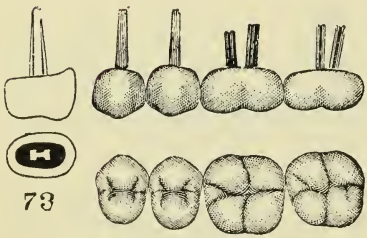
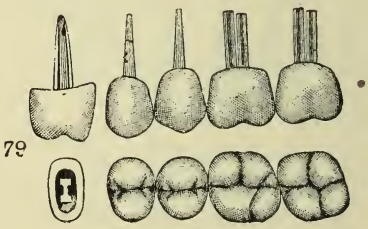
Logan Crowns.—Continued.

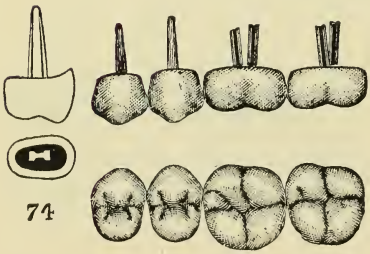
Upper, Bicuspids and Molars.

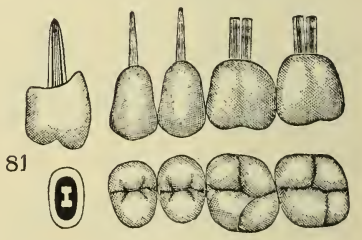




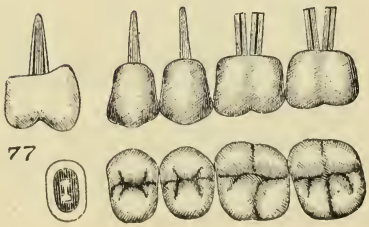


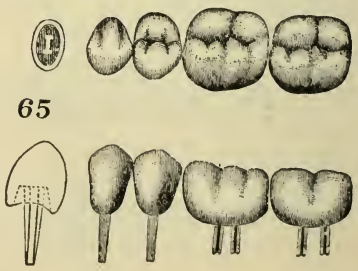






Lower, Bicuspids and Molars.





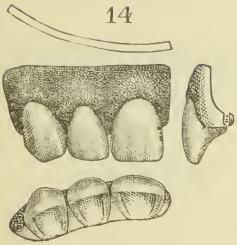
The Sibley-Wilmington Teeth.

Made by Gideon Sibley.

Chart of Gum Sections, Upper, Sets of 14.

See Prices on Page 8.

14



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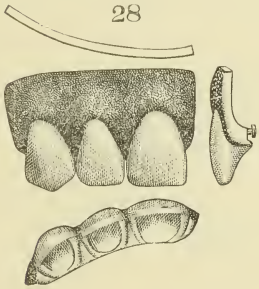

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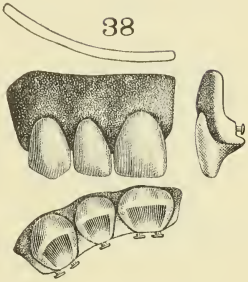

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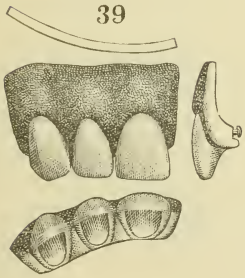

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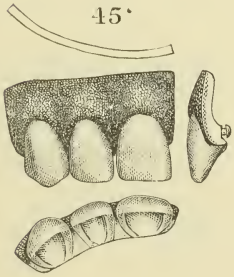

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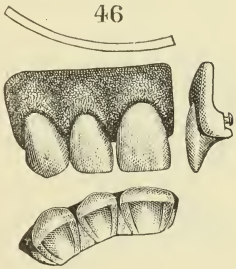

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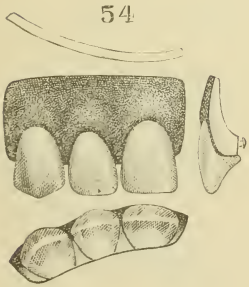

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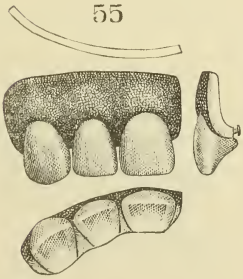

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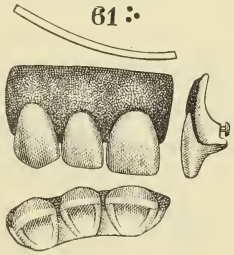

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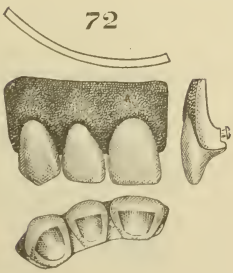

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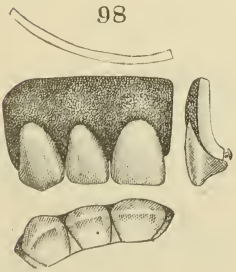

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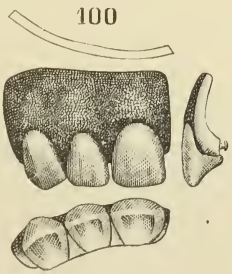

The Sibley-Wilmington Teeth.—Continued.

Made by Gideon Sibley.

Chart of Gum Sections, Upper, Sets of 14.

See Prices on Page 8.

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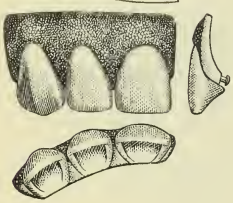

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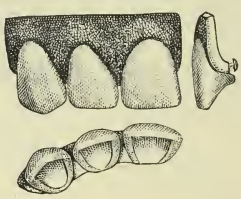

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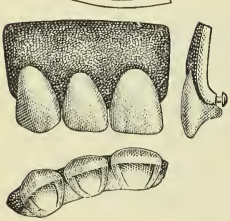

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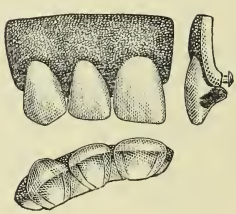

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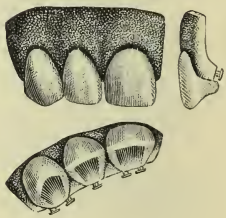

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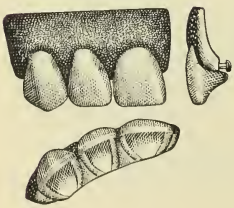

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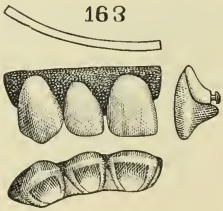

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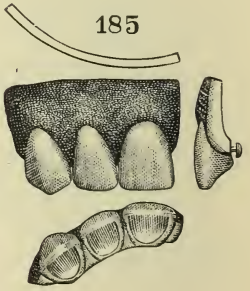

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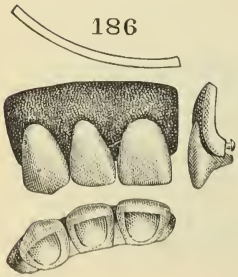

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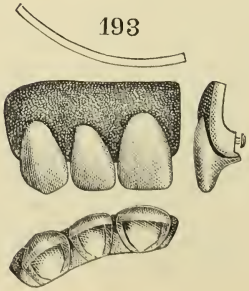

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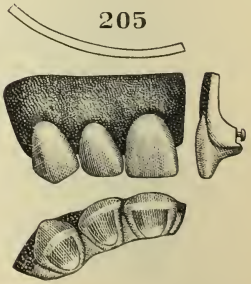

The Sibley-Wilmington Teeth.—Continued.

Made by Gideon Sibley.

Chart of Gum Sections, Upper, Sets of 14.

See Prices on Page 8.

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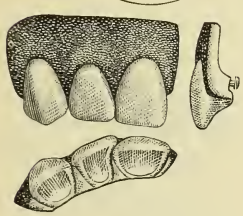

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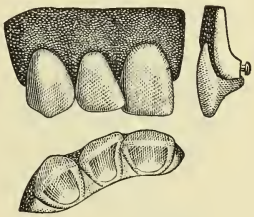

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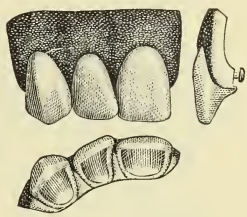

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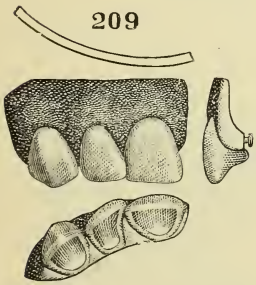

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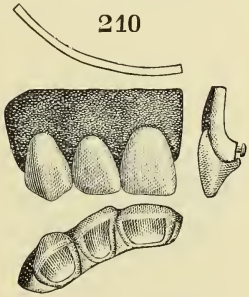

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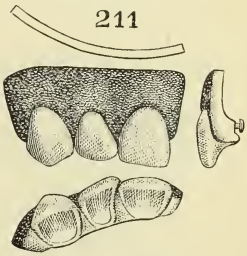

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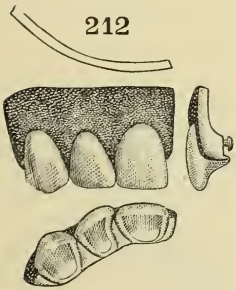

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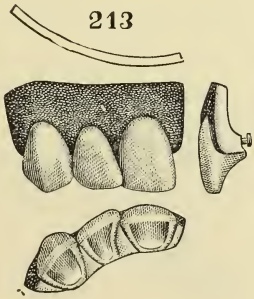

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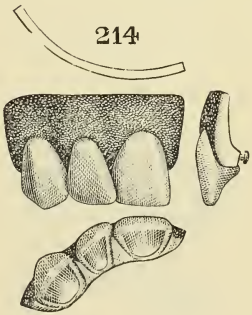

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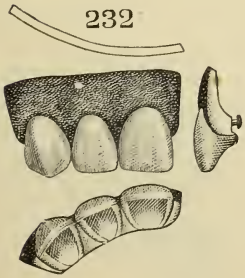

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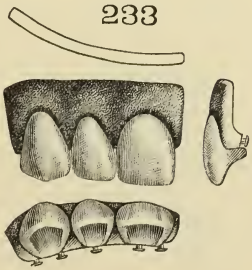

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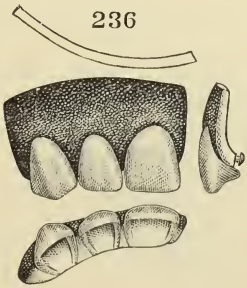


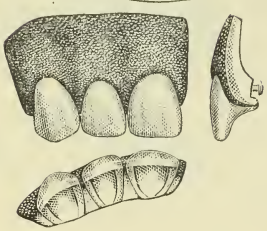
The Sibley-Wilmington Teeth.

Made by Gideon Sibley.

Chart of Gum Sections, Upper, Sets of 14.

See Prices on Page 8.

237



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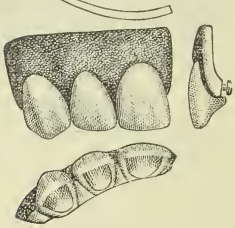

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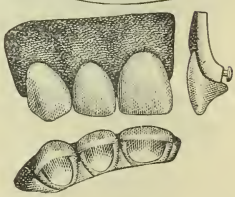

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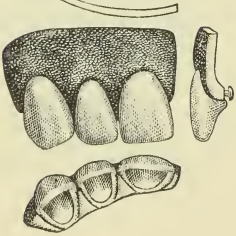

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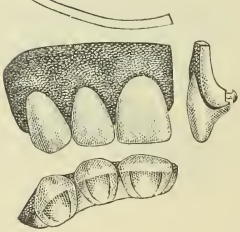

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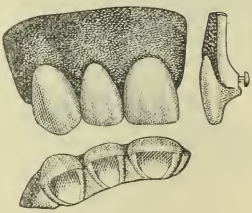

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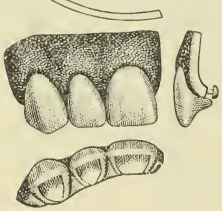

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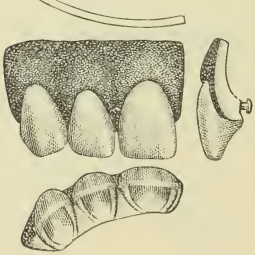

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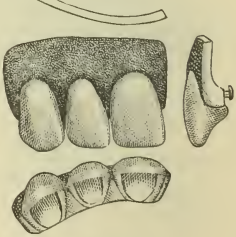

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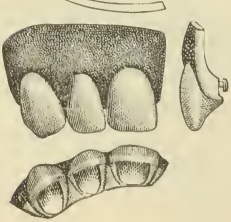


256

257

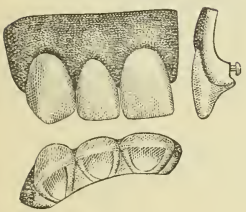
The Sibley-Wilmington Teeth.—Continued.

Made by Gideon Sibley.

Chart of Gum Sections, Upper, Sets of 14.

See Prices on Page 8.

262



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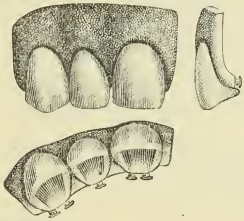

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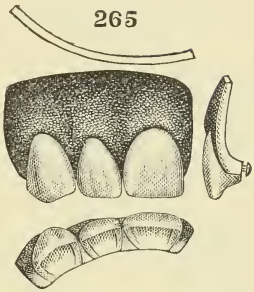

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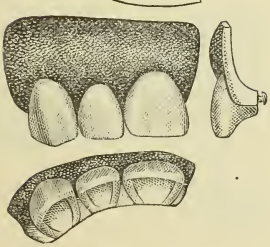

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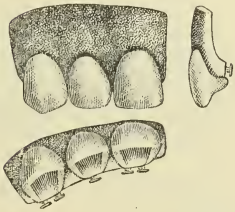

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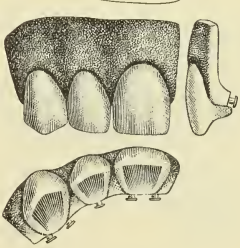

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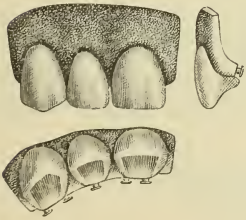

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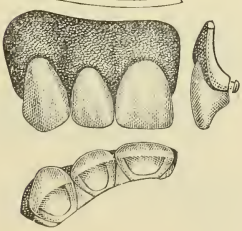

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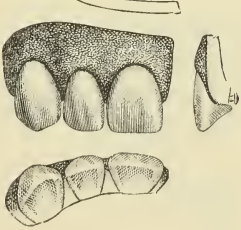

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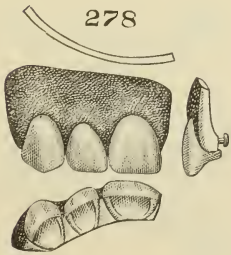

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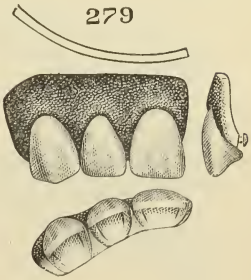

The Sibley-Wilmington Teeth.—Continued.

Made by Gideon Sibley.

Chart of Gum Sections, Upper, Sets of 14.

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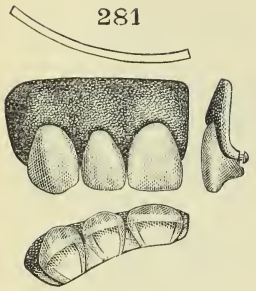
281



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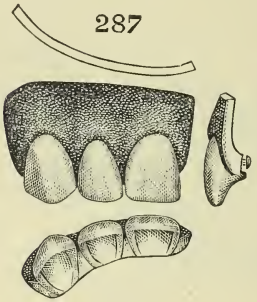

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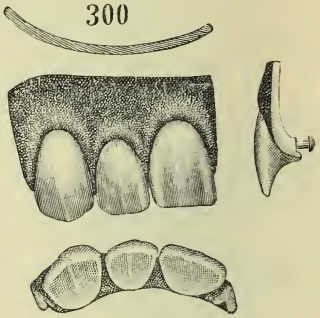

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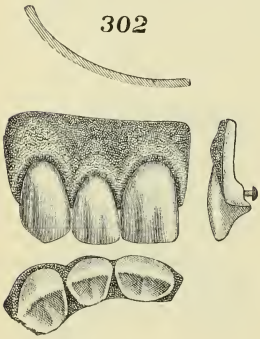

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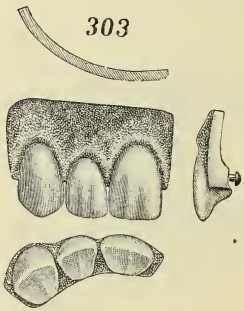

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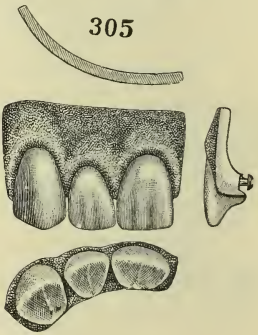

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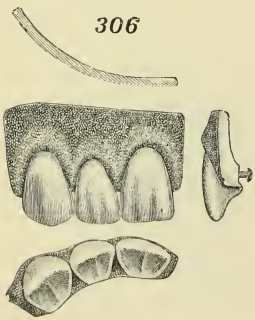

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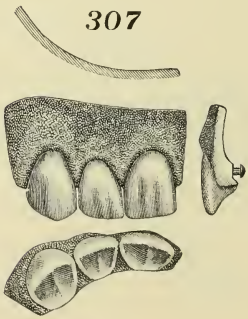

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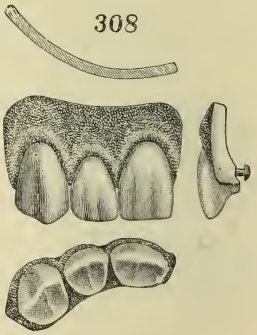

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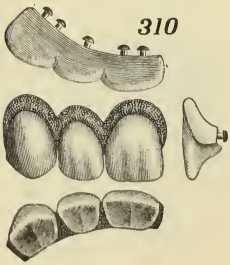

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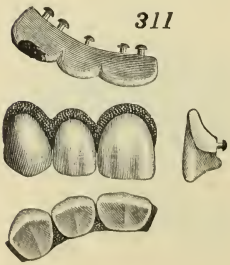

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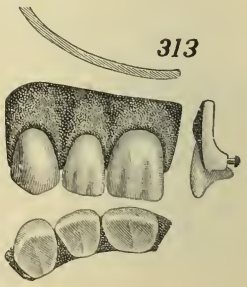


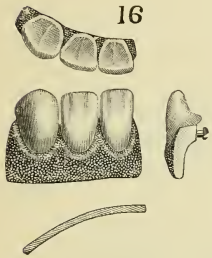
The Sibley-Wilmington Teeth.—Continued.

Made by Gideon Sibley.

Chart of Gum Sections, Lower, Sets of 14.

See Prices on Page 8.

16



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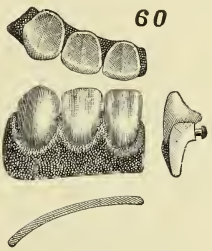

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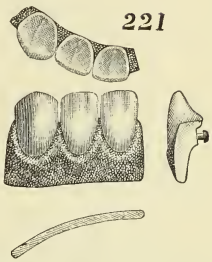

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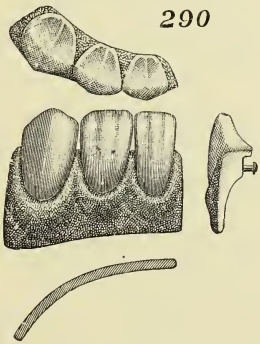

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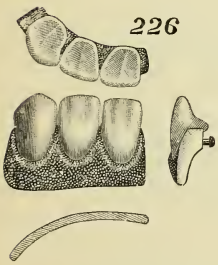

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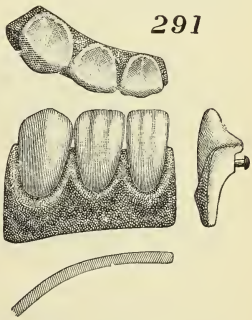

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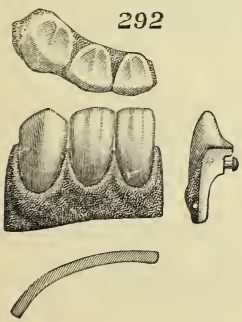

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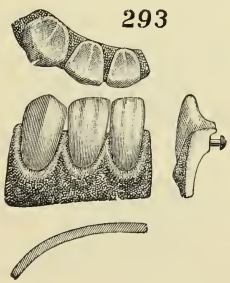

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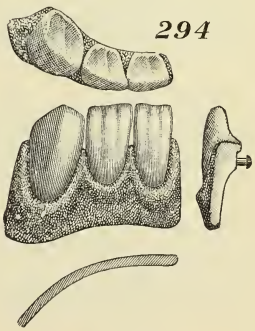

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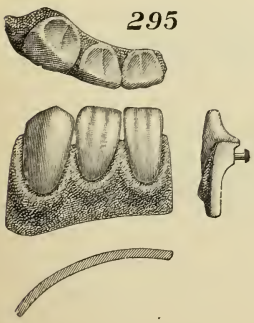

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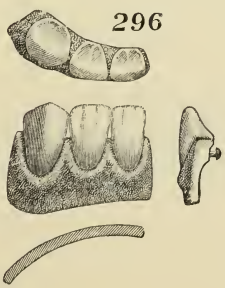

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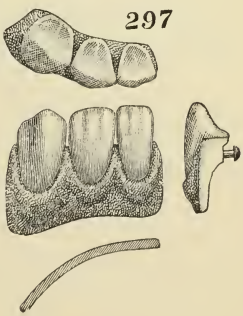


The Sibley-Wilmington Teeth.—Continued.

Made by Gideon Sibley.

Chart of Plain Teeth for Rubber Work. Upper Incisors and Cuspid.

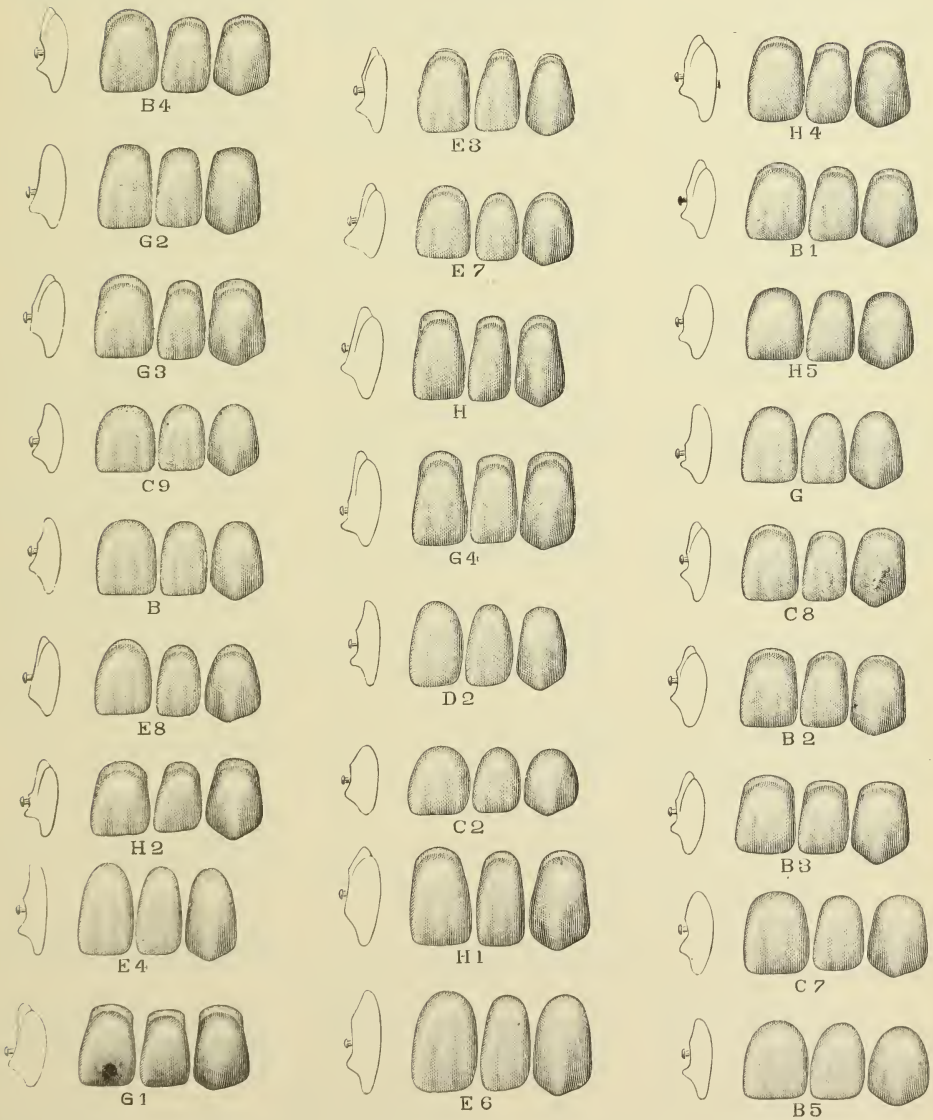
See Prices on Page 8.

The Sibley-Wilmington Teeth.—Continued.

Made by Gideon Sibley.

See Prices on Page 8.

Chart of Plain Teeth for Rubber Work. Upper Incisors and Cuspid.



The Sibley-Wilmington Teeth.—Continued.

Made by Gideon Sibley.

Chart of Plain Teeth for Rubber Work. Upper Incisors and Cuspid.

See Prices on Page 8.

The dash (thus —) under the mould number, as shown above and on next page, indicates that it is a "Wilmington" mould; and will be found on all teeth, as well, now made from these moulds.

The Sibley-Wilmington Teeth.—Continued.

Made by Gideon Sibley.

Chart of Plain Flat Back Teeth for Metal Plate and Crown Work. Upper Incisors and Cuspid.

See Prices on Page 8.

The Sibley-Wilmington Teeth.—Continued.

Made by Gideon Sibley.

Chart of Plain Flat Back Teeth for Metal Plate and Crown Work. Upper Incisors and Cuspid.

See Prices on Page 8.

DENTAL FURNITURE.

OUR furniture department has grown as our business has grown.

We don't just take orders from pictures in books. We have the stock right here on our floor.

Before a dentist invests a lot of money in a chair he ought to know what he is buying. If he comes to us he can find out. We have all the different kinds side by side on our floor.

We know all about them.
We are not prejudiced.

The New Columbia Dental Chair.

Made by The Ritter Dental Mfg. Co.

Highest Position.

Lowest Position, 20 inches. Highest Position, 38 inches.

The base of this chair is made so that the oil is contained in a single casting seven inches deep, with no openings in sides or bottom, so leakage is impossible.

To remove the oil, release the lever of the rotating lock, and then lift up the whole upper part of the chair, telescope tubes and all; the oil will remain in the lower base casting, free to be removed as desired. This construction is new.

The New Columbia Chair.

Made by The Ritter Dental Mfg. Co.

Anaesthetic Position.

The New Columbia Dental Chair combines such self-evident advantages and manifest simplicity with great strength and beauty, it is the admiration of customer and competitor alike. It presents all correct ideas, and especially avoids freak mechanisms so often introduced as novelties, but without practical value, and gives the dentist an article which for convenience, attractiveness, strength and comfort to patients is unexcelled.

Description of the New Columbia Dental Chair.

The mechanism for raising and lowering consists of an oil pump, by means of which oil is pumped out of the base of the chair, which serves as a reservoir, into a tube in which a rod is closely fitted by means of leather washers.

The pump is operated by pressing the foot down on the long, main lever shown near the base of the chair; a spring inside always returns the lever to the upper position after each stroke.

The oil entering the tube at the bottom and under the closely-fitted rod, pushes the rod upward, and thus raises the chair.

To lower it, press the foot on the small lowering lever; this opens a valve, and allows the oil to flow out of the tube back into the reservoir.

This simple device produces an easy and quiet movement, and avoids complicated appliances used in other chairs.

To revolve the chair, release the small lever, a portion of which shows just back of the lowering lever.

The chair can then be turned entirely around, if necessary, and the levers will all turn with it. The body is carefully balanced, and can be tilted to any position, and held by means of the lever shown projecting from under the seat.

The child's foot-rest is shown folded into the front plate (See page 66), an when swung out, it is in operative position. The pivoted extension on the adult foot-rest is illustrated fully extended; when not required, it can be turned back in to the space between the main frame.

The telescoping tubes which guide the chair body up and down require no oiling, owing to the construction, embodying a rolling contact, instead of a broad, frictional surface, producing the easy movement, great neatness and great strength, for which the New Columbia is so well known.

The rolling contact in the New Columbia enables us to produce a very rigid construction, and in seven years' use has never shown the least wear. The arms may be detached when desired, or they may be reversed, turning the convex portion next to the patient, allowing the operator to stand closer to the patient. On the left arm provision is made for fastening a spittoon. Table and bracket attachment, or fountain spittoon, can be fastened underneath the seat.

The back frame is pivoted to the chair body, and can be adjusted forward to a vertical position, or backward below a level with the seat, as shown in the anæsthetic position, and can be locked in any position. When adjusted forward and the arms reversed as explained, it makes a very comfortable child's seat. The upholstered back is hinged at the upper part to a vertically sliding frame, and allows the lower end to be moved forward to support the small of the patient's back.

The hand wheel on the back frame locks the upholstered back at any desired height.

The lever above the hand wheel controls the various positions of the head-rest. See page 78 for description of the Ritter Plain and Sectional head-rests.

The operator, standing at the side of the chair, has full control over all the levers; raising and lowering, or rotating can all be accomplished without stepping to the back. The main lever makes a convenient foot-rest.

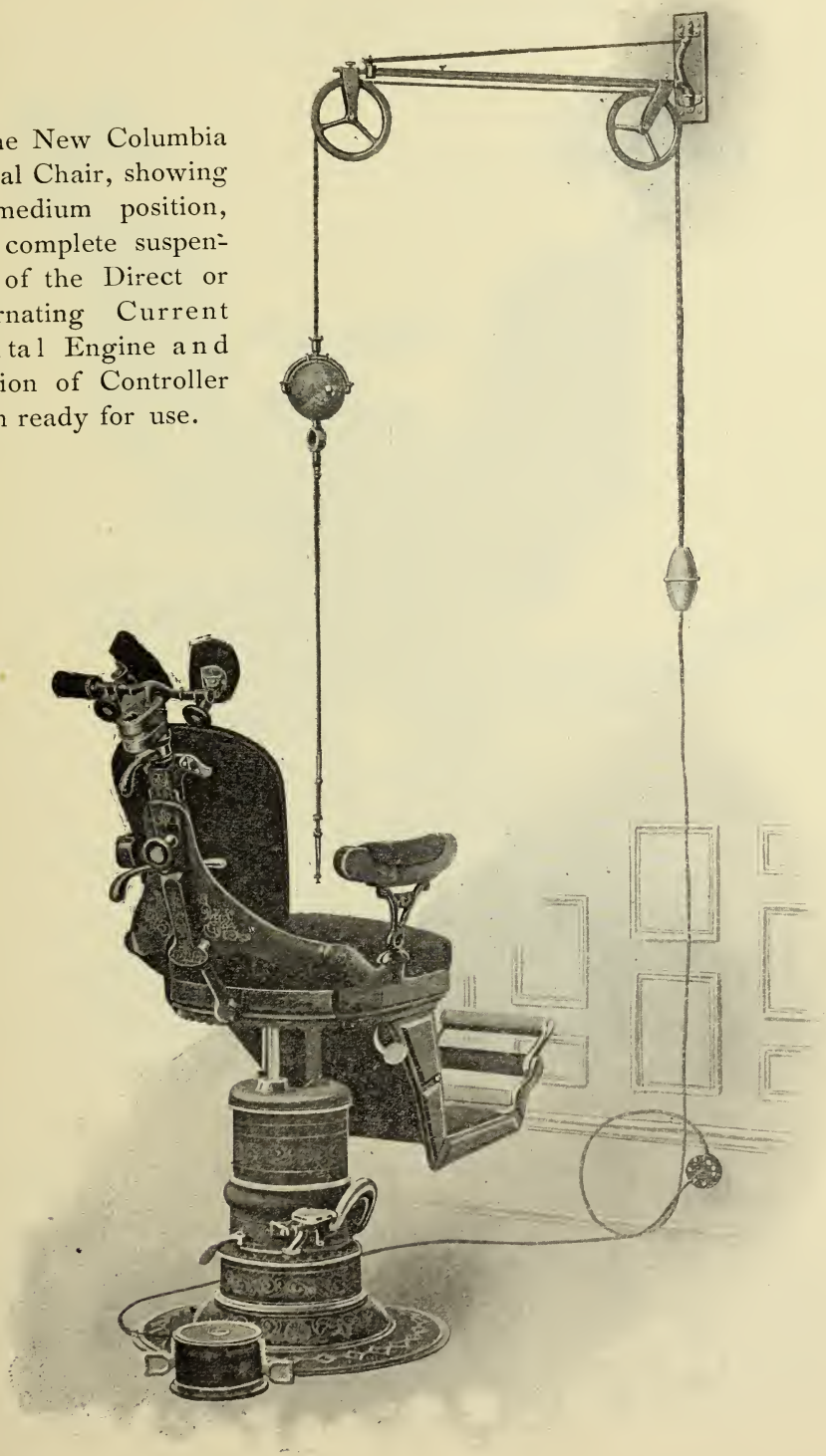
If you want a chair which will answer every requirement, be a convenience to yourself and a comfort to your patients, choose the New Columbia.

PRICES OF CHAIRS.

Best Quality Mohair Plush, with Wilton Carpet	$150.00
Plain Maroon Leather and Wilton Carpet	150.00
Finest Green or Maroon Plush, with Wilton Carpet	155.00
Green or Maroon Seal Leather, with Wilton Carpet	157.00
In Cane	150.00

Ritter Sectional head-rest, as shown on page 78, adds ten dollars ($10) to above prices.

The New Columbia Dental Chair, showing its medium position, also complete suspension of the Direct or Alternating Current Dental Engine and position of Controller when ready for use.



The Favorite Dental Chair.

Made by The Ritter Dental Mfg. Co.

With Sectional Head Rest.

We make this chair in two heights, No. 1 and No. 2.

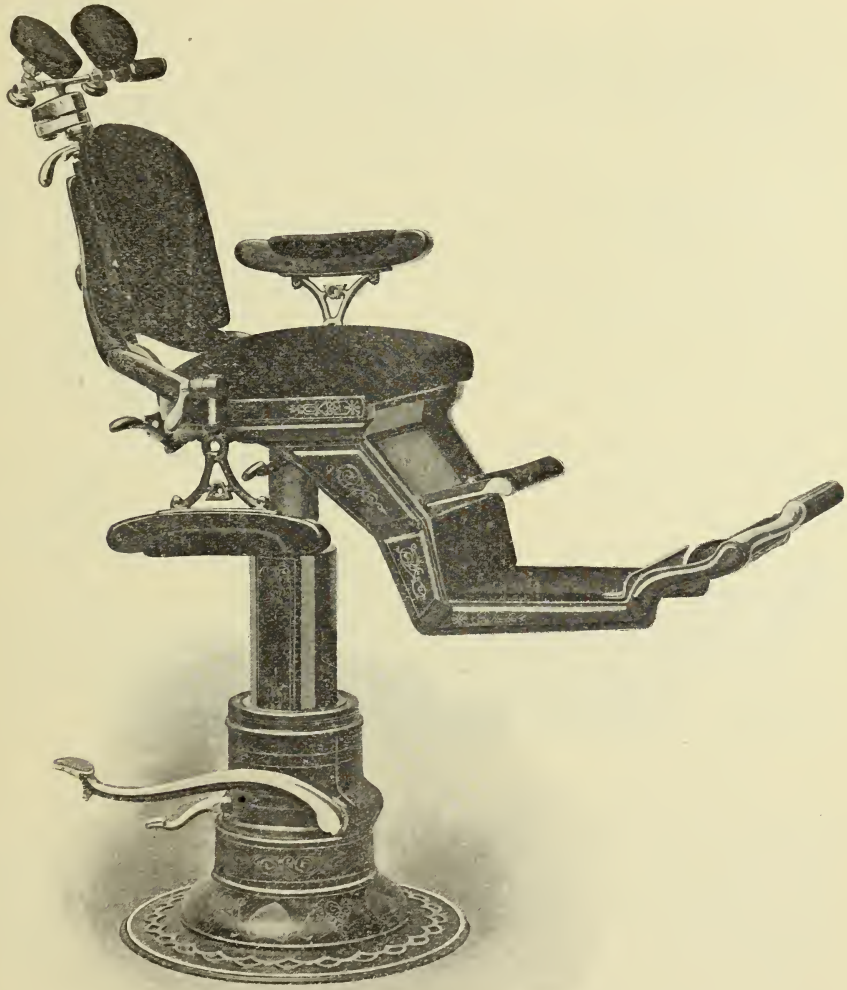
The range of the No. 1 Favorite chair is from 18 inches, lowest position, to 35 inches, highest position

The range of the No. 2 Favorite chair is from 16 inches, lowest position, to 38 inches, highest position.

The lowest position of the chair when tilted back is 12 inches.

The Favorite Dental Chair.

Made by The Ritter Dental Mfg. Co.



The Favorite Dental Chair has been constructed on lines very similar to the New Columbia, embodying all of our latest improvements.

The flat disc base, first introduced by us, is sufficiently large to support the chair without screwing to the floor, and in no way interferes with the operator.

Above the disc is the reservoir for the oil, which, being made all of one piece, without holes through it, makes it impossible for the oil to leak. The cylinder is fitted into the tank and made to rotate and carry all of the levers with it, and by pushing the corrugated lever near the bottom of the cylinder to the left with the foot, the cylinder may be locked at any desired point. The levers are always ready for use, and in the same relative position to the top.

The Favorite Dental Chair.—Continued.

For the principle used in raising and lowering the chair, see the description of the oil pump used in our New Columbia Chair, as they are the same. This is a guarantee in itself, as the splendid success of this feature of the Columbia is well known.

In raising and lowering the chair, the patient is hardly conscious of its moving, it runs so smoothly and quietly. This is accomplished by means of the guiding arrangement inside of the tube and cylinder. The outer guide tube has four polished and ground surfaces that slide in an adjustable ring in the base. The balance of the tube is finished in enamel and handsomely decorated. The inner guide tube is a polished and ground tube which slides through an adjustable ring in the top of the outer guide tube. The adjustment rings embody the easiest adjustment known, and are for the purpose of taking up any play that may be in the chair base. By simply turning the rings they put an even amount of adjustment on all the sides.

We use no keys for preventing the tubes from turning, as keys always wear loose and are unsatisfactory, but we have an arrangement inside that guides the tubes up and down and holds them from turning, and will never wear, as it lubricates itself with the raising of the chair. The pump is bolted to the bottom of the cylinder. By opening the rotary lever, the cylinder can be bodily raised from the tank, and there being no bottom in the cylinder, it is easy to inspect the pump, or any working part, without removing from their places.

The body of the chair is tilted the same as the New Columbia. The child's foot-rest and the adult's extension foot-rest are the same as in the New Columbia. The arms are adjustable in any position that could posssibly be desired, up or down, to or from the patient, at any angle to the back, or reversed and hung beside the seat frame and locked into any desired position by the small lever beside the seat frame, as shown in the illustration. With this arrangement it is not necessary to remove the arm from the chair, and it is always there when you want to use it.

The back frame is pivoted to the chair body, and can be adjusted forward to a vertical position, or backward to a level below the seat to form the anæsthetic position. The back is supported by a curved bar, which locks automatically, and it is impossible for the back to slip. The upholstered back is attached in the same manner as in the New Columbia.

The hand-wheel, that locks the back extension slide, extends through a slot in the back, and is connected to the slide and serves to help in raising the back.

Description of our head-rests will be found on page 78 of this book, or pages 10 and 11 of our 1900 catalogue.

PRICE LIST.

Favorite Chair No. 1, range from 18 to 35 inches.

Best Quality Mohair Plush, with Wilton Carpet	$150.00
Plain Maroon Leather and Wilton Carpet	150.00
Finest Green or Maroon Plush, with Wilton Carpet	155.00
Green or Maroon Seal Leather, with Wilton Carpet	157.00
In Cane	150.00

Favorite Chair, No. 2, range from 16 to 38 inches.

Best Quality Mohair Plush, with Wilton Carpet	$165.00
Plain Maroon Leather and Wilton Carpet	165.00
Finest Green or Maroon Plush, with Wilton Carpet	170.00
Green or Maroon Seal Leather, with Wilton Carpet	172.00
In Cane	165.00

Ritter Sectional Head Rest adds ten dollars ($10.00) to above prices.

The Favorite Chair will be ready for delivery about Jan. 1, 1901.

Limited space prevents our showing the Favorite chair in the anæsthetic position, but we would refer you to page 67, where you will see this position in the New Columbia Chair.

The Sibley Dental Chair.

Highest Position, 41 inches from the floor.
Lowest Position, 18 inches from the floor.

Patented March 6, 1900.
No. 644,640.
No. 644,641 No. 644,642
No. 644,643 No. 644,644
Other Patents Pending.

The raising and lowering of the Chair is by a *strictly hydraulic principle,* without the use of a single ratchet, clamp or other such device. Its vertical range of from 18 inches, the lowest, to 41 inches, the highest position—the greatest range known in Dental Chairs—is easily, quickly, and noiselessly secured without any supplemental lifting attachment or the need of projecting through the floors.

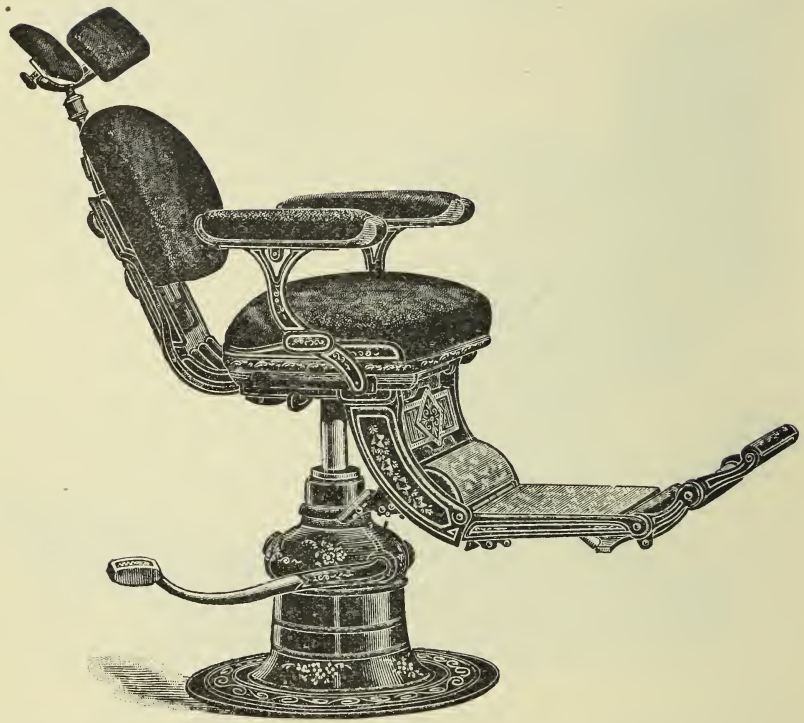
The Chair revolves on its base, carrying all levers with it, where they are always within easy reach of operator. Oil Tank is cast solid with the base, hence no leakage is possible. A self-renewing Oil Cushion causes the Chair to sink the last two inches so softly that you can't tell when it stops. The back adjustment is such that it cannot "drop," and thus terrorize patients. The "Dual" Lever controlling Head Rest is so constructed that its vertical movements are secured without changing the position of the pads, besides other desirable features not elsewhere found.

PRICES.

First Quality Maroon Plush, "Plain" Head Rest	$165.00
" " Plain Leather " "	165.00
" " Sealskin, " "	172.00
" " Maroon Plush, puffed and trimmed with Silk Cord, "Plain" Head Rest	185.00
" " Embossed Leather, puffed and edged with Cord, "Plain" Head Rest	195.00
With the Sibley "Sectional" Head Rest, as shown in illustrations, additional	10.00

See illustration of new Arm Adjustment on page 86.

New Model Wilkerson Chair.

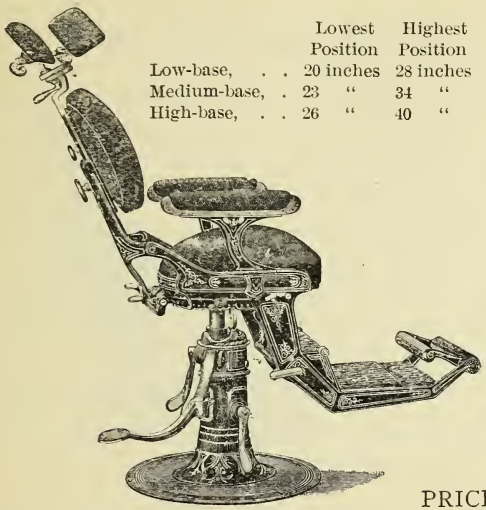


The New Model Wilkerson Chair at its lowest position is 18 inches from the floor, and from that point has a vertical range of 22 inches, to its extreme height of 40 inches.

The Chair is elevated, lowered, clamped and rotated by the same foot lever, which in the old style Wilkerson serves only to raise the chair.

PRICES.

In Finest Maroon or Green Plush	$200.00
In Crimson Plain Turkey Morocco	200.00
In Maroon French Finish Leather	200.00
In Sealskin	207.00
In Finest Green or Maroon Plush, puffed with Plush, trimmed with Silk Cord, with Wilton Carpet	220.00
In Crimson Embossed Turkey Morocco, puffed with Plain Morocco, edged with Cord, with Carpet to match	230.00



	Lowest Position	Highest Position
Low-base, . .	20 inches	28 inches
Medium-base, .	23 "	34 "
High-base, . .	26 "	40 "

Wilkerson Dental Chair.

Most dentists know what the Wilkerson Chair is. It has been in use for about 21 years. No one has ever found any very serious fault with it.

At the reduced price, it is undoubtedly the best chair for the money made to-day.

The illustration shows the disk base pattern, with sectional head rest, described in detail on page 79.

The Chair is also made with leg base and regular head rest. The prices are for the Chair as shown, with regular instead of sectional head rest.

PRICES.

In Finest Green or Maroon Plush, Crimson Plain Turkey Morocco or Leather, French Finish Leather or Cane $125.00
In Sealskin 132.00
In Finest Green or Maroon Plush, puffed with Plush, trimmed with Silk Cord, with Wilton Carpet 145.00
In Embossed Turkey Morocco, Crimson, puffed with Plain Morocco, edged with Cord, with Carpet to match 155.00
Fancy upholstery made to order only.
Watkins Sectional Head-Rest (see page 79), instead of regular Head-Rest, adds $10.00 to these prices.

The High-Low Wilkerson.

The High-Low Wilkerson Chair is almost identical in appearance with above illustration. Its range is materially greater, being acquired by inserting portion below base into the floor.

The base of the High-Low Wilkerson at its lowest point is 20 inches, while its highest positions are 37, 39 and 41 inches, depending upon the depth of beam beneath floor of office.

In Finest Green or Maroon Plush, Crimson Plain Turkey Morocco or Leather, French Finish Leather or Cane $135.00
In Sealskin 142.00
In Finest Green or Maroon Plush, puffed with Plush, trimmed with Silk Cord, with Wilton Carpet 155.00
In Embossed Turkey Morocco, Crimson, puffed with Plain Morocco, edged with Cord, with Carpet to match 165.00
Watkin's Sectional Head-Rest adds $10 to these prices.

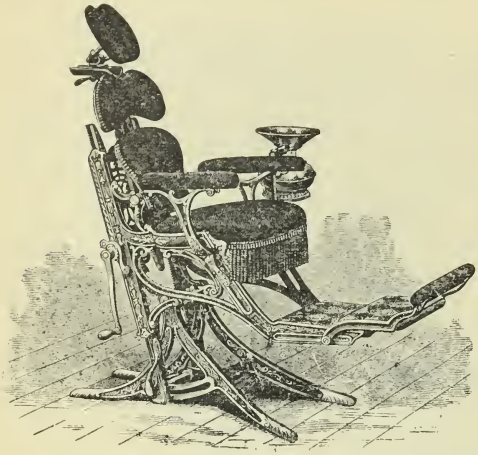
Chair Oil.

The oil we supply for Wilkerson Chairs is prepared especially for Wilkerson Chairs. It will stand any variation in temperature without gumming.

3½ pints for the Wilkerson Low-Base Chair or 3 pints for medium base $1.00
4 " " " High " or 9-in. High-low Chair. or Pedal Lever. .. 1.25
5 " " " 11-in. " or 13-in. " " 1.50

Linen Covers for Chairs.

Linen Covers for Seat, Back, Arms, and Head-Rest 4.00



The Morrison Dental Chair.

Lowest position of seat, 15 inches from floor.
Highest position of seat, 42 inches from floor.

The Morrison Chair is used very largely in colleges and by students. It is also preferred by many operators on account of its remarkable range. In its lowest position it is nearer the floor than any other type of chair, while its highest is an inch higher than the High-Low Wilkerson.

The Morrison Chair is substantially made, and is more generally used than any chair raised and lowered by hand.

PRICES.

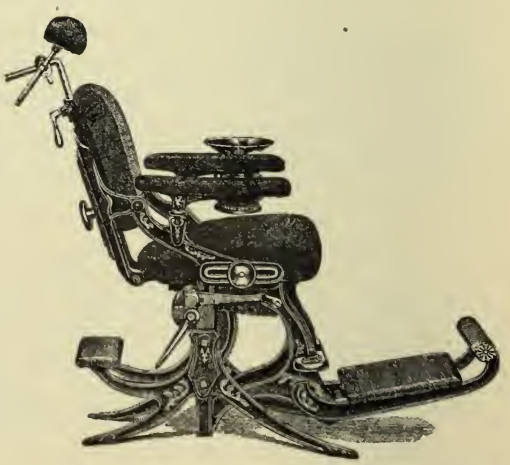
In Corded Upholstery (Student's Morrison)	$ 76.00
In Best Quality Green or Maroon Plush or Plain Morocco	90.00
In Morocco, Embossed	100.00
In Finest Quality Green or Maroon Plush, puffed and trimmed with Plush	110.00

The illustration shows No. 4 Cuspidor, No. 4 Bracket, No. 3 Socket, which are extra, and add $7.00 to the above prices.

Watkins Sectional Head-Rest (see page 79), instead of regular Head-Rest shown, adds $25.00 to the above prices.

The Cycloid Chair.

The Cycloid Chair is light and yet well balanced. As a chair for examinations it is without an equal. It is well adapted to the needs of the beginner. It presents a handsome appearance, and is an ornament to any office. The lifting mechanism is unique, and has a range of ten inches.



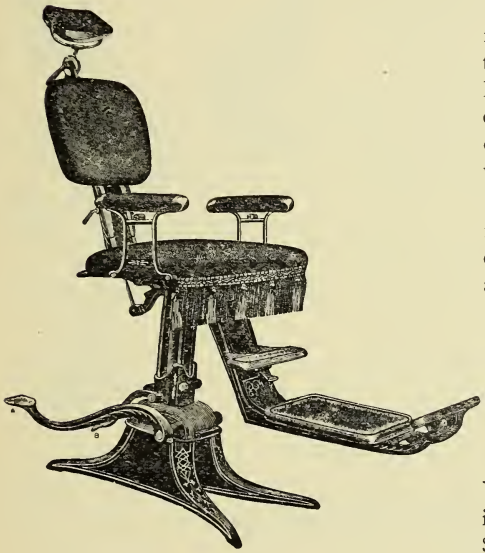
PRICES.

Price, upholstered in Corded Material	$63.00
Price, upholstered in Best Quality Maroon or Green Plush	76.00

Watkins Sectional Head-Rest (see page 79), instead of regular Head-Rest shown adds $25.00 to above prices.

The illustration shows No. 4 Cuspidor, No. 4 Bracket, and No. 1 Socket, which are extra, and add $6.00 to above prices.

Duplex Lift Dental Chair.



By means of both pump and hand adjustment, this chair has a range from a low position of 18 inches to its highest of 40 inches. It has every essential movement. If a greater elevation than that afforded by the pump is desired, the body of the chair may be raised with one hand before the chair is occupied.

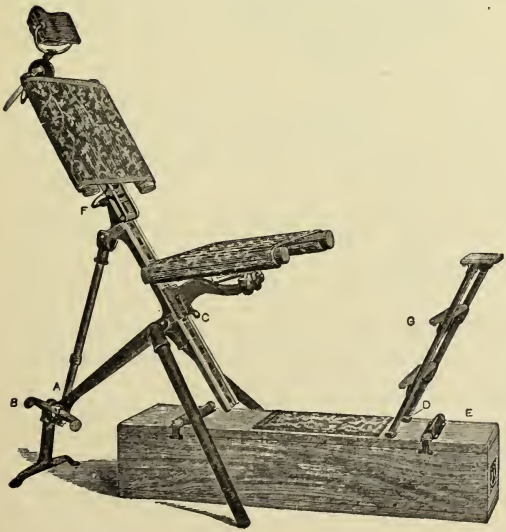
The Duplex Lift Chair meets every requirement, and is the best low-priced hydraulic chair made. It presents a handsome appearance.

PRICES.

Maroon Plush Upholstery	.....	$85.00
Corded	"	80.00
Carpet	"	72.00

Watkins Sectional Head-Rest (see page 79), instead of regular Head-Rest shown, adds $25.00 to the above prices.

White's Portable Dental Chair.



In this Chair the different parts have all essential movements, affording comfort to operator and patient. Less than ten minutes required for packing or unpacking. The seat has a range of 18 inches from lowest to highest position, and back has corresponding range.

The packing box is made of hard wood; dimensions in inches, 39x13x7½ inches deep. Chair and box, packed, weigh 88½ pounds.

Price, including crate $36.00

The Ritter Sectional Head-rest.

Made by The Ritter Dental Mfg. Co.

In this head-rest we think we have made ample provision for every conceivable position. The pads can be adjusted independently, either in or out, so that they are quite close together, or far apart; they can be turned around on the main cross-bar into any required position. The hand screws on the backs of the pads allow them to turn so their faces can be placed at any angle to each other. Turning the pads into the position so they converge toward their lower ends, offers a position of comfort to patients, which we fear many practitioners have not fully understood.

Head-Rest pads in the parallel position support the back of the head at only two places, but when turned as above described, they give the neck and head complete support over the entire extent of the pads.

A patient will never complain of his neck getting tired if you use this head-rest adjusted as just explained, so that it gives support to the neck, as well as to the head. The pads in this position also allow plenty of space for a lady's hair. The hand-wheels lock the pads independently in any position.

A convenience which is not provided for in other sectional head-rests is the arm-rests, neatly upholstered, which are now provided on all our sectional head-rests, without extra charge. They can be readily placed on either side, or be removed entirely. The pads are together adjustable throughout a large range by means of the ball and socket joint in the upper section; then with the lower sections also, the range and positions are almost unlimited. The latter movements are all controlled by a sidewise adjustment of a lever.

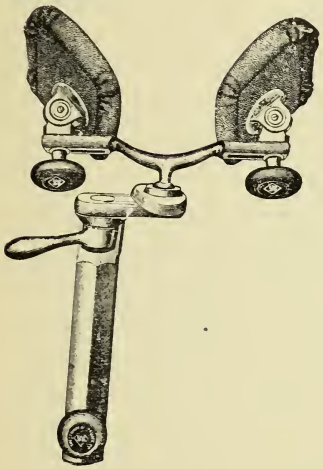
The vertical movement is controlled by a sidewise adjustment of a small lever which is beside the other lever, as shown in the illustration on page 70. This is the best and most convenient slide lock that was ever made, and in no way interferes with the arrangement of the pads.

The head-rest can be adjusted to any of our make of chairs, or the Wilkerson, but it will be necessary to send us the old head-rest and the back slide. No credit allowed for old parts.

Our regular head-rest, furnished on all chairs unless otherwise ordered, is the same as the sectional head-rest just described but from the ball up the pads are stationary, as shown in cut on page 67, or our Catalogue, page 8.

The new sectional head-rest will be supplied from the ball upward for $16.00. If slides and all parts are to be furnished new, then the cost will be $38.00.

The Watkins Sectional Head-Rest.

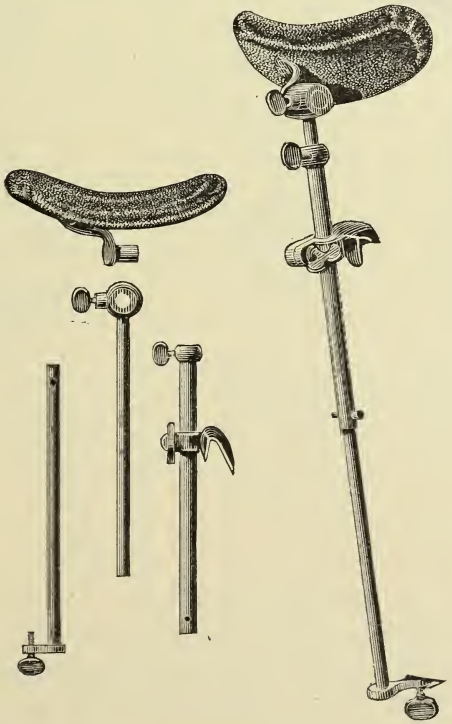


The addition of this head-rest to the chair means greatly increased comfort to operator and patient. The pads may be placed in any desirable position and may be locked at any points. When sold with the chair this head-rest adds $10.00 to its price. See page 75, etc. When ordered for chairs that have been in use, all parts shown in engraving are furnished; the head-rest cannot be supplied otherwise.

PRICES.

Watkins Sectional Head Rest for Wilkerson Chairs	$35 00
" " " " " S. S. White Pedal Lever Chairs	40 00
Watkins Sectional Head Rest for Morrison Chairs	35 00
" " " " " Archer and other wood back Chairs	37 00
Watkins Sectional Head Rest for Cycloid	33 00
" " " " " S. S. White Swinging, 1st Style, Pedal Lever and Harris Chairs	33 00

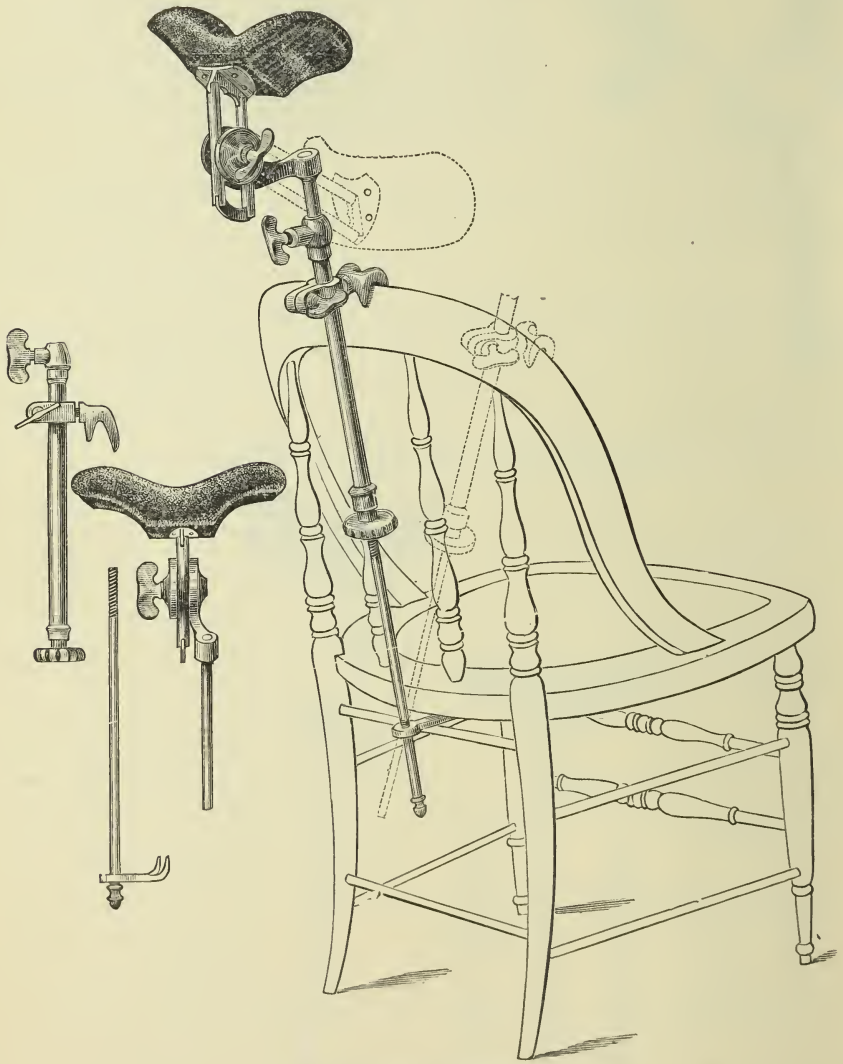
Snowden & Cowman Head-Rest.



This is a first-class head-rest for comparatively little money. It weighs 4 pounds, and can be packed in a space 13x4 inches. Price, $4.50.

New Portable Head Rest.

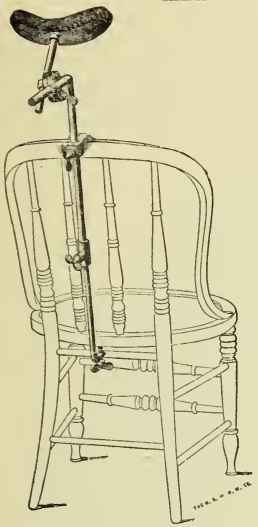
Made by Snowden & Cowman Mfg. Co.



New Portable Head Rest.

This head-rest can be attached to any chair, is very firm and can be raised, lowered or moved, backward or forward without interfering with attachment to the chair. Price, $10.00.

Portable Head-Rests.

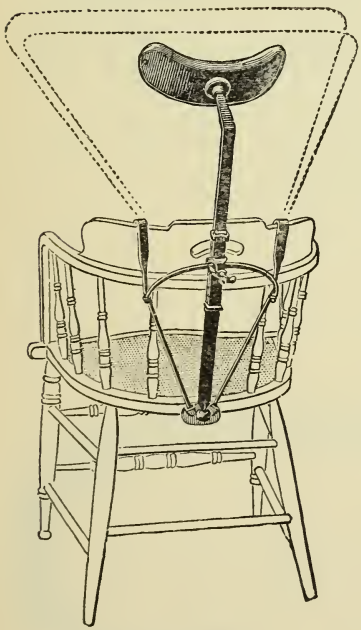


The S. S. White Portable Head-Rest.

This Head-Rest has free and full movement in all directions, and it may be adjusted with equal facility to suit a very tall man or a small child. It can be attached with ease to almost any style of chair. In the cut it is shown in position on an ordinary office-chair. it weighs but five and a quarter pounds, and when folded up and packed for transportation, it occupies but little space, being adapted in these particulars to the needs of the traveling practitioner.

It is substantially made and nicely finished; all the metal parts nickel-plated. The head-pad is upholstered in Maroon and Green Plush, in the best manner and with the best materials.

Price $12.00



Dr. O. C. White.

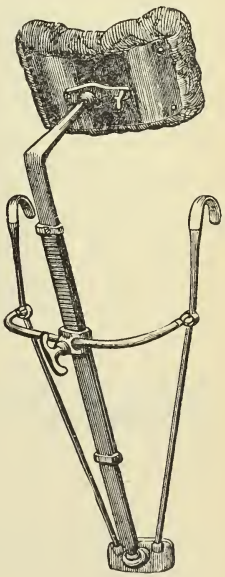
Portable Head-Rest No. 9.

Considerably heavier than Nos. 6 or 7. Works on a ball and socket joint. Metal portions made of steel and wrought and malleable iron, nicely japanned. Weight, 7¼ lbs.

PRICE.

Complete, Plush, Nickel-plated Mountings.....$13 00

Complete, Raw Silk, Nickel-plated Mountings..... 11 00



No. 9.

Dr. O. C. White's Portable Head-Rest.

Has full movements in all directions and is adjusted by simply turning thumb screw. Dotted lines show range. Weight, 4¾ pounds.

PRICES.

No. 6, upholstered in Plush $8.00
No. 7, upholstered in Raw Silk 7.00

Second-Hand Chairs.

It is clearly impossible to publish a list of second-hand chairs in a book of this character.

We always have a lot of second-hand chairs in stock, but our stock changes.

We would rather write letters about second-hand chairs than anything we know of.

Any man who is going to buy a second-hand chair can't afford to buy it until he writes to us.

We will always send pictures of any chairs we have, and write as exact and as honest a description of them as we can construct in the English language.

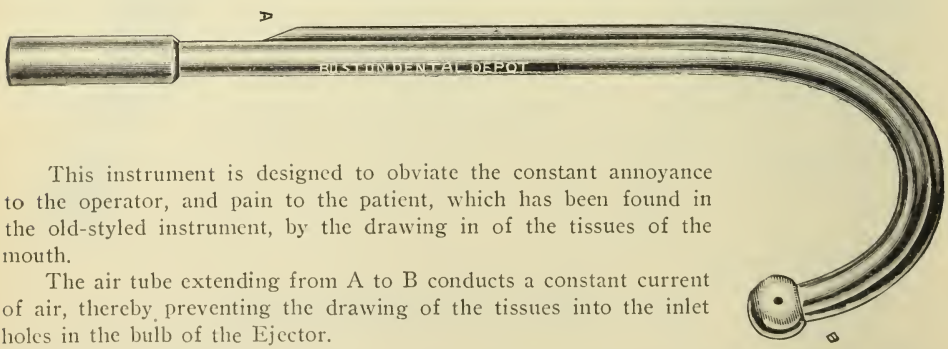
We will stand back of anything we say about them.

If we don't show better value for less money than anybody else, we don't want the order.

Saliva Ejector.

Suggested by R. R. Andrews, D. D. S., Cambridge, Mass.

Made by The Boston Dental Mfg. Co.



This instrument is designed to obviate the constant annoyance to the operator, and pain to the patient, which has been found in the old-styled instrument, by the drawing in of the tissues of the mouth.

The air tube extending from A to B conducts a constant current of air, thereby preventing the drawing of the tissues into the inlet holes in the bulb of the Ejector.

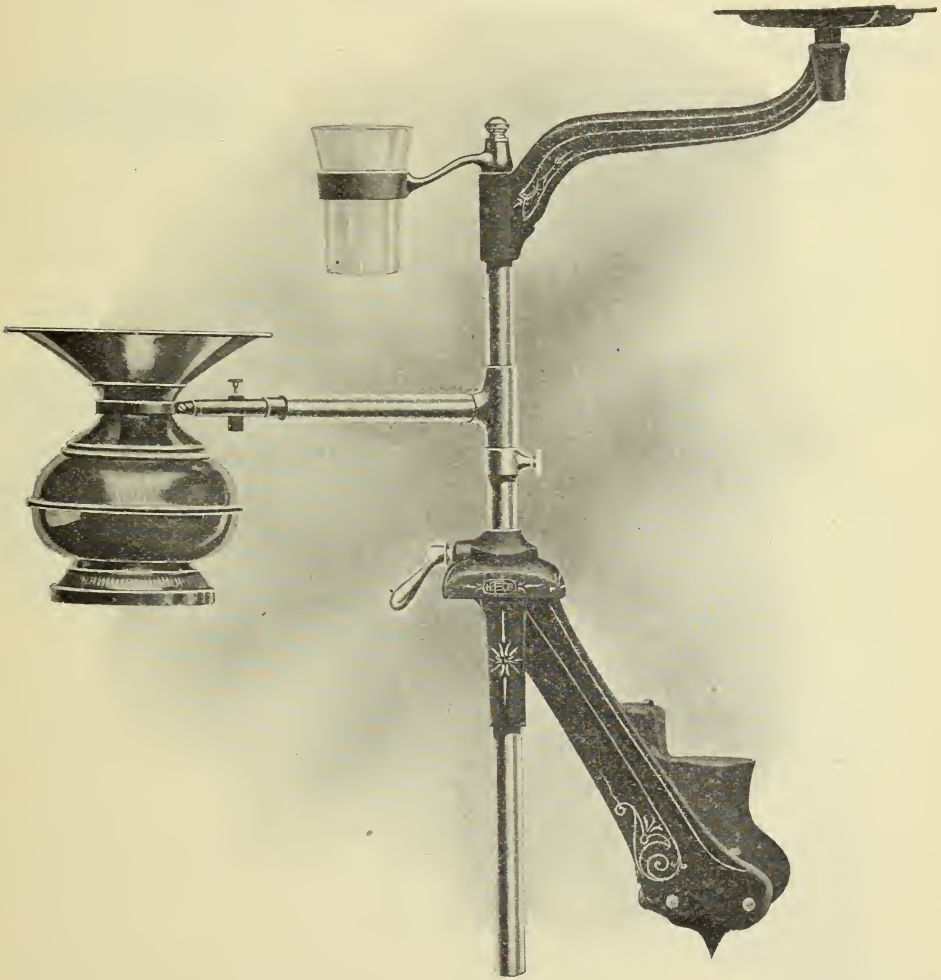
Being made of metal, it can be sterilized or boiled, thereby insuring cleanliness.

The end of Ejector is arranged to fit improved connection manufactured by S. S. White Dental Mfg. Co.

Price, each $1.00

Dental Bracket No. 1 and Cuspidor No. 3.

Made by The Ritter Dental Mfg. Co.



The movements of this bracket differ from those commonly used. This is fastened to under side of chair, and the standard, instead of turning in a circle, moves parallel to the side of the chair throughout about 18 inches, remaining in whatever position placed. In the illustration it is in the extreme forward position. Pushing the arm to the right moves it nearer the back of the chair, and it is always the same distance away from the chair, a feature unlike the usual brackets which turn about a pivot.

It has a swinging glass holder at top of standard, and directly below is the table bracket arm. Bracket table is screwed to casting shown on end of arm, this being pivoted on a stud allows the table to revolve. It is provided with spittoon holder, which adjusts in length and also moves up and down on standard.

Standard has a vertical range of 14 inches, and is locked securely at any point by the small hand lever.

It is strong and durable, quickly adjusted, and finely finished in nickel and black japan, gold striped.

To be fastened to any chair provided for a bracket attachment.

PRICES.

Bracket, with Cuspidor and Holder complete	$25.00
Cuspidor No. 3, with Gold Catcher	3.00
Holder, from Standard outward	3.00
Bracket	19.00

Dental Bracket No. 2 and Cuspidor No. 4.

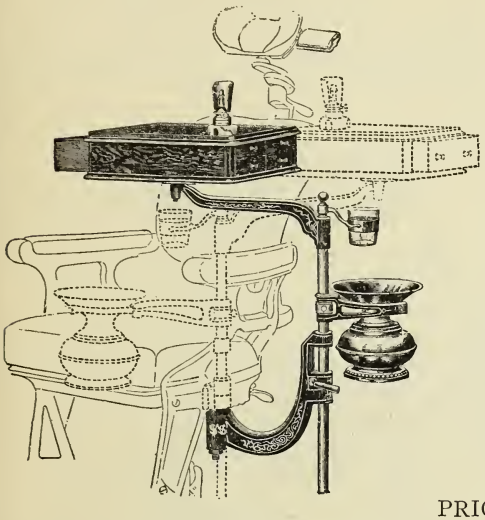
Made by The Ritter Dental Mfg. Co.

Our No. 2 Bracket is fastened under the chair seat, same as No. 1. It pivots at the fastening, and turns around throughout half a circle.

There is the usual standard and bracket table arm and glass holder. The cuspidor bracket and holder can be adjusted vertically, and is hinged near the middle to allow it to fold back out of the way. The standard can be raised or lowered and securely clamped at any point.

PRICES.

Bracket No. 2, complete, with No. 4 Cuspidor and Holder	$16.00
Cuspidor No. 4, without Gold Catcher	1.50
Holder from Standard outward	2.50
Chair Socket, with Holder, for holding No. 3 Cuspidor	3.00
Chair Socket, with Holder, for holding No. 4 Cuspidor	3.50
Cuspidor No. 3, with Gold Catcher	3.00
Cuspidor No. 4, without Gold Catcher	1.50



Combination Dental Chair Attachment.

The illustration shows attachment for the Wilkerson Chair.

A combination attachment permits the operator to put his table where he wants it. The table that carries the tools ought to be part of the chair that holds the patient.

It should rise and fall and rotate with the chair. It should never be in the way of operator or patient.

This attachment is secured to the chair as shown. It is designed to swing around out of the way when not in use. It carries not only the table, but spittoon and tumbler as well.

PRICES.

Complete, with Holmes Table, Walnut or Oak	$46.00
" " " " Mahogany	49.00
" " Allan " Glass Sides, Walnut or Oak	28.00
" " " " " " Mahogany	30.00
" " " " Plain Sides, Walnut or Oak (see cut)	26.00
" " " " " " Mahogany	28.00
" " Imitation Rosewood Table	22.00
Without Table	16.00

No. 4 Cuspidor is included in above prices; other Cuspidors may be substituted at value (see page 94).

White's Portable Tool Tray and Spittoon Stand.

We do not illustrate this portable stand, as it is seldom used. It consists of a portable upright stand carrying table, spittoon and holder, as shown in above cut. It may be moved from place to place.

PRICES.

Complete, with Holmes Table, Walnut or Oak	$50.00
" " " " Mahogany	53.00
" " Glass-side Allan Table, Walnut or Oak	32.00
" " " " " Mahogany	34.00
" " Plain-side Allan Table, Walnut or Oak	30.00
" " " " " Mahogany	32.00
" " Imitation Rosewood Table	26.00

Hand Cuspidor.

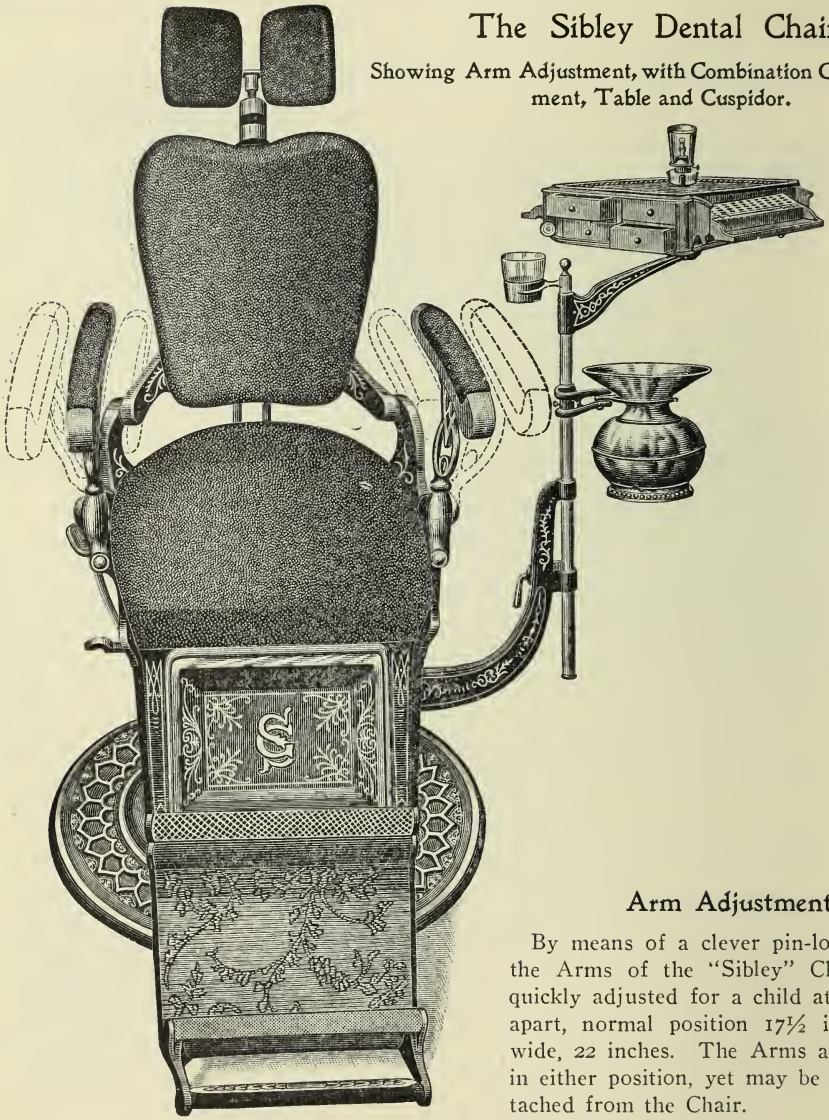
A hand cuspidor is indispensable in a well regulated office. It is particularly useful during extraction under anæsthetics, as it may be held up close to chin of patient. It is made of stout brass, nickel plated. It measures 2 inches in depth by 6 inches in diameter.

PRICES.

Without handle	$1.30
With handle	1.50

The Sibley Dental Chair.

Showing Arm Adjustment, with Combination Chain Attachment, Table and Cuspidor.



Arm Adjustment.

By means of a clever pin-locking device the Arms of the "Sibley" Chair may be quickly adjusted for a child at 13½ inches apart, normal position 17½ inches, extra wide, 22 inches. The Arms are alike firm in either position, yet may be instantly detached from the Chair.

Combination Chair Attachment.

This Combination Chair Attachment meets every requirement of the many operators who prefer their Table for Tools and Materials thus near, and moving up and down with the Chair.

PRICES.

Attachment, with Holmes Table and No. 3 Cuspidor	$38.00
" with extra quality Allan Table, glass sides and No. 3 Cuspidor	28.00
" with extra quality Allan Table, plain sides and No. 3 Cuspidor	26.00
" without Table or Cuspidor	13.00
Cuspidor Holder, plain, with either 2 inch or 3 inch Ring	2.00
" No. 3, spun brass, nickel plated	3.00
" No. 2, nickel plated	1.50

THE WEBER PORCELAIN BOWL FOUNTAIN SPITTOON.

Patented December 19, 1899. Other patents pending.

Fig. 1. The Weber Porcelain Bowl Fountain Spittoon.

THE Weber Fountain Spittoon has five distinctly new and exclusive features.

I. It has a solid porcelain bowl.

II. It is absolutely noiseless.

III. It is sanitary.

IV. The saliva ejector is self-cleaning.

V. It is sold at a right price.

THE BOWL

The bowl is made of solid porcelain. People in the china trade call this particular grade of ware "unbreakable porcelain." It is called unbreakable porcelain because it is made of the toughest clay obtainable, and in the process of manufacture is vitrified three times. The bowl can be broken, but it is practically impossible to break it by accident. We will furnish a new bowl for $2.50 if it ever does break. We guarantee the enamel never to craze. It doesn't require any argument to show the advantage of a porcelain bowl over any other form of bowl. No dentist ever bought a Fountain Spittoon with a metal bowl who wouldn't have preferred a porcelain bowl if it had been made. A porcelain bowl is cleaner than any other bowl, because acids have no effect on it and because there isn't any possible chance of anything about it ever wearing out, or even showing signs of wear.

A porcelain bowl is a new thing in Fountain Spittoons, but there isn't anything new about porcelain. A forty year old china plate can't be distinguished from one of the same pattern fresh from the kiln.

THE WATER SUPPLY

The method of flushing the bowl of this spittoon is distinctly new. It is the patented mechanical feature that makes the operation of the spittoon absolutely noiseless. It is noiseless when it is new. It is bound to be noiseless if it is used a lifetime. The hissing

sound made by other fountain spittoons is more often caused by the water from the supply or inlet pipe coming in contact with the air than anything else. There is only one possible way to obviate that difficulty. There is only one possible way for water to be projected from a supply pipe into a tub without noise. That way is by depressing the end of the pipe until its mouth is below the surface of the water. It is that principle exactly that makes the Weber Fountain Spittoon noiseless in operation. The inside view of the bowl (Fig. 2) shows how it is accomplished.

Fig. 2. Inside of Bowl.

The inlet or supply pipe enters through the side of the bowl and extends downward, so that its mouth enters the depression in the bowl. In operation this depression contains just enough water to cover the mouth of the pipe. Water is admitted to the bowl below the level of the water contained in the depression. The force of the flow is distributed equally around the outer edge of the inner surface of the bowl and as the entering water is also prevented from coming in direct contact with the air, an absolutely noiseless flow of water from the supply pipe into the bowl is insured to the end of time.

THE WASTE PIPE

There is nothing particularly new in the method of carrying water from this spittoon. The best possible form of waste pipe for any spittoon or any other similar thing is a pipe that has a straight drop from the bowl and that will get all the water out of the way by the shortest possible route.

There is no obstruction in or about the waste pipe of this spittoon. It is provided with a simple removable trap or strainer at the opening from the bowl. This trap is to prevent cotton pellets, etc., from being carried into the waste pipe. Its construction renders an overflow an impossibility.

Fig. 3. The Weber Fountain Spittoon with Chair Attachment.

THE SANITARY FEATURES

It is perfectly obvious that this spittoon must be sanitary. The simplicity of its construction insures it. Nothing could be added to it or taken from it that would make it more sanitary.

THE TUBING

All tubing used in this spittoon is the best the market affords. It comes to us direct from the rubber factory and is covered with silk, especially for this purpose, by the best people in the business. By this method we know every foot of tubing supplied to be absolutely new and fresh. It should last seven years.

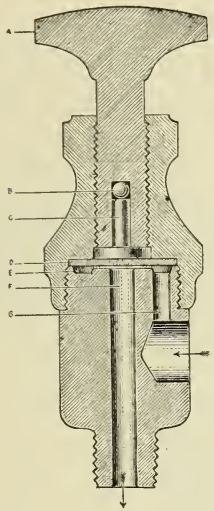


Fig. 4. Sectional view of the Weber Ball Bearing Valve.

THE VALVES All valves used in or about the spittoon are ball bearing. The ball-bearing valve is one of the best features of this spittoon. It is the only ball-bearing valve used on any spittoon. Its construction is shown in the sectional view (Fig. 4.)

a. is a milled wheel for opening and closing the valve.

b. is a ball to prevent wear and friction.

c. is a headed pin, the end of which is in contact with ball and which rests upon rubber valve.

d. is a rubber diaphragm regulating flow of water.

e. is a groove around head of supply pipe.

g. is for admitting supply of water.

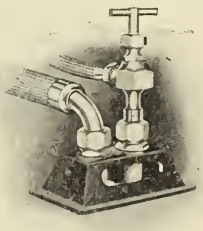
f. is for outlet of water.

The only thing about these valves that can possibly wear out is the rubber diaphragm, which any dentist can renew in five minutes.

These valves have been designed for this particular spittoon, because they may be opened and closed easier than any other form of valve. They are used on the inlet pipe leading to the bowl as well as on the saliva ejector and the water supply cock.

THE SALIVA EJECTOR The saliva ejector, supplied with this spittoon, we believe to be superior to any other form. In operation it is just as effective as others because it operates on exactly the same principle. The improvement is embodied in the method of cleaning. Makers of other spittoons call particular attention to the ease with which their ejectors may be taken apart for cleaning. It is not necessary to take this ejector apart for cleaning. It may be cleaned without taking it apart.

The Weber Saliva Ejector is supplied with four feet of silk covered tubing attached to the faucet and leading to the mouth piece. The nickel plated pipe carrying the saliva to the bowl does not project straight into the bowl, but is carried down to the outside of the rim of the bowl about two inches away from it, and from that point comes up over the rim, forming a common S trap and discharging into the bowl (see Fig. 1.) If the mouth of this pipe is closed with the finger and the water turned on, any obstruction that may have lodged in the tubing or connections, is immediately discharged through the mouth piece.

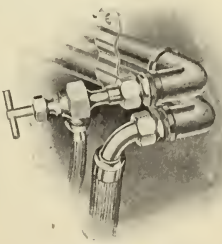


Floor Connection.

The Weber Saliva Ejector is made to carry the regulation glass mouth piece, but a nickel plated mouth piece is furnished with it without extra charge.

WATER SUPPLY COCK The opposite end of the pipe that carries water to the saliva ejector supplies drinking water for use at the chair. Under this cock is a tumbler holder equipped with drain leading into the bowl of the spittoon.

FLOOR AND WALL CONNECTIONS Connections for either the floor or wall attachment will be furnished as desired. The valves in these connections are simple in construction and



Wall Connection.

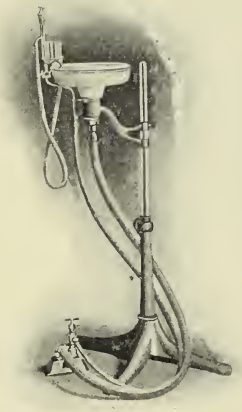


Fig. 5. The Weber Fountain Spittoon on Portable Stand.

such as any first class plumber would supply on any high grade contract. They are the best valves that can be made. They are furnished ready for attachment to the supply and waste pipes leading to them.

THE PRACTICAL SIDE One glance at this spittoon in actual use is a stronger point in its favor than any description that could be written of its operation. It has quicker action than any spittoon on the market. By quick action we mean that saliva or any other thing that may be thrown into the bowl is carried out of sight quicker than in any other spittoon we know of. The centrifugal force of the water in the depression in the bowl carries a thin film of water directly to the outlet. This water does not whirl. It simply flows to the center from all points at once. Anything thrown into the bowl disappears before it has made one quarter of one revolution. It doesn't matter into what part of the bowl it is thrown. The action is the same.

QUALITY AND PRICE In putting this spittoon on the market we have had in view two distinct objects. First, to make a spittoon that would be superior in every conceivable way to anything that had preceded it. Second, to sell it at a price that would show only a fair margin of profit and that any dentist would be justified in paying.

Both objects have been accomplished.

The workmanship on every detail of this spittoon is absolutely perfect. They are not made by contract but every part of them is made in a factory especially equipped with modern machinery and skilled labor for this particular purpose. Every part of the spittoon is interchangeable. They couldn't be made better if they sold for four times the price asked for them.

PRICES.

Weber Attached Fountain Spittoon complete with porcelain bowl, saliva ejector, water supply cock, tumbler holder, all silk covered tubing, floor or wall connections and attachment for any chair except those noted below.....**$40.00**

Discount for Cash, 5 per cent.

If attached spittoon is desired for either the Gould or Crown chairs the price is $5.00 extra.

The attached spittoon will be furnished less the crane for attaching to chair at $1.50 less than above price.

Long rod and extension arm, including tripod for bracket table, will be furnished at an additional cost of $5.00.

Weber Portable Fountain Spittoon. A portable stand instead of attachment for chair (see Fig. 5), including everything furnished with attached spittoons, adds $5.00.

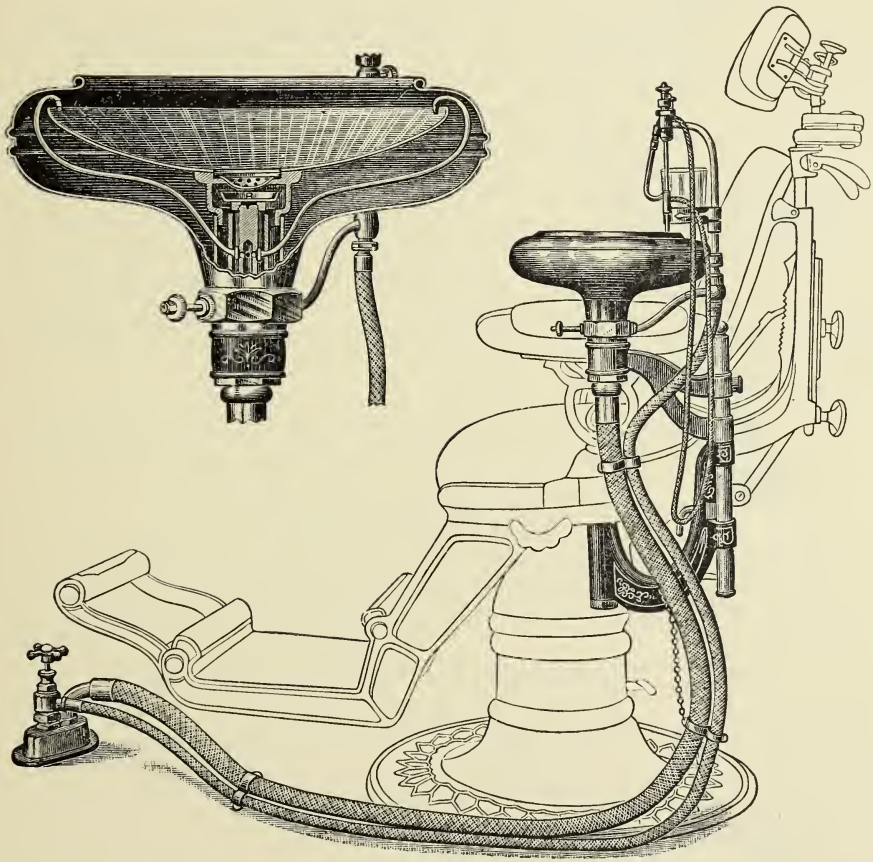
GUARANTEE.

The Weber Fountain Spittoon is guaranteed in every detail. If it doesn't work as we say it works, or if there is any imperfection in the manufacture, the money paid for it will be refunded.

LEE S. SMITH & SON, Sole Agents,
PITTSBURG, PA.

The "Sibley" Attached Fountain Cuspidor.

Patented June 13, 1899.



This CUSPIDOR consists of two stationary spun Brass Bowls of generous size, the Outer Bowl curving up and projecting over the Inner Bowl. Between these Bowls, and connected with the Supply Pipe in the center, two Arms revolve and discharge two jets of water in the Inner Bowl.

The water does not "whirl" at all in this Cuspidor, but runs direct to the outlet carrying the nauseous contents with it.

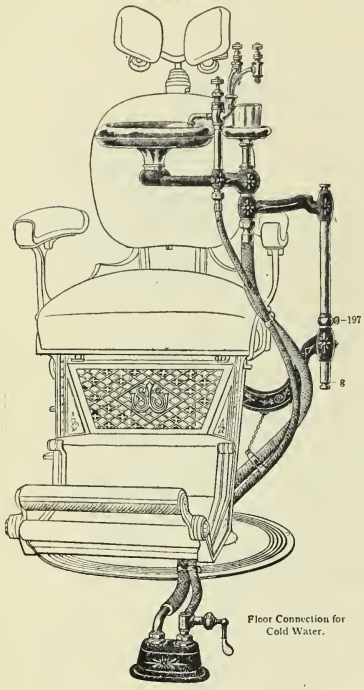
It cleanses quickly and thoroughly.

It requires only about one-third the usual quantity of water to effect this.

It is noiseless, and being so exceedingly simple in design and construction, there is less wear, hence greater durability.

The excellence of its workmanship and work, the fullness with which it meets the requirements of modern dentistry, will appeal to those who demand hygienic qualities with attractive appearance in Office Furnishings.

Attached Fountain Cuspidor, complete with Floor Connections	$50.00
" " " with Saliva Ejector and Floor Connections	54.00
Saliva Ejector	4.00



The Spiral Flush Spittoon.

The bowl of the Spiral Flush Spittoon is made of heavy brass, nickel plated, with rim curving inward. It may be removed for cleaning, but in use remains stationary. Water is admitted to the bowl through a curved nozzle, that is constructed to turn in against the sides of the bowl. This nozzle discharges a stream of water that covers the inside of the bowl and carries to the waste pipe anything dropped in the bowl.

The Spittoon is of simple construction, not likely to get out of order, and quite effective in operation.

PRICES.

No. 5 Attachable, complete as shown with floor or wall connection for cold water.....$50.00
" " with floor or wall connection for hot and cold water..... 60.00

For use on Columbia Chair a washer is required, which will be furnished without charge.

Other Forms of the Spiral Flush Spittoon.

The lower illustration shows a type of spittoon adapted for use in colleges. We have also sold a number of this type to throat specialists. Waste is discharged through upright column.

PRICES.

Spiral Flush College Spittoon, No. 3 A, as shown.....$40.00
Spiral Flush College Spittoon, No. 3 B, similar in style to No. 3 A, with addition of Crane, Rod, Bracket Arm, etc., for carrying Table 50.00
Spiral Flush College Spittoon, No. 3 C. Similar to No. 3 B, provided with cocks for Saliva Ejector and drinking water.. 60.00
Spiral Flush Office Spittoon, No. 4. Regular type of Spiral Flush, as shown in upper illustration, but mounted upon upright standard, instead of attached to chair. For cold water, without table attachment 50.00
For Hot and Cold Water, without table attachment..... 60.00
For Cold Water, with table attachment and plain table..... 60.00
For Hot and Cold Water, with table attachment and plain table. 70.00

Spiral Flush Spittoon.—Continued.

For use in connection with bracket, table, etc., we provide a heavier crane and longer rod, which with extension arm permit the spittoon to be used as part of regular combination attachment.

PRICES (Not Including Table).

For Bracket-Table, Floor or Wall Connection, for Cold water.....$59.50
" " Floor or Wall Connection, for Hot and Cold water..... 69.50

If the purchaser already has the Combination Attachment, we can supply him with the regular outfit less the crane and the short standard rod, but with the crane extension arm, at the following

PRICES.

For Bracket-Table, less Crane and Standard Rod, but including Crane Extension Arm, Floor or Wall Cold Water Connection $48.75
The same, with Floor or Wall Hot and Cold Water Connection..... 58.75

SPIRAL FLUSH SPITTOON, with independent stand for such chairs as Morrison, Duplex, Cycloid, etc., or other chairs without means for direct attachment.

PRICES.

With Independent Stand, Floor or Wall Connection for Cold Water.....$55.00
With Independent Stand, Floor or Wall Connection for Hot and Cold Water..... 65.00

Saliva Ejector and Syringe Attachment.

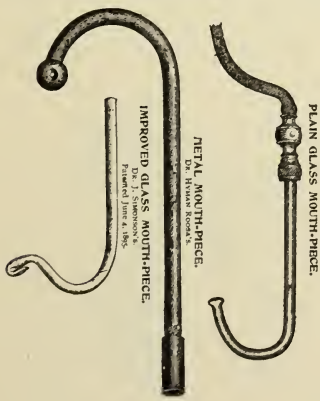
For use with Spiral Flush Spittoons.

If a Saliva Ejector isn't any more useful than the Spittoon itself, it is certainly not any less useful. No dentist who ever uses a Saliva Ejector can ever get along without it. It pumps all excess saliva from the patient's mouth. It makes work easier for the operator, and the operation easier for the patient.

The Syringe Attachment is unique. It throws a fine stream of water; it is under perfect control.

PRICES.

No. 1 Saliva Ejector only adapted for White's old style spittoons, each.....$4.00
No. 3 Saliva Ejector only for use on college spittoons, No 3 B and 3 C..... 4.00
No. 4 Saliva Ejejctor only for use with Spiral Flush Office Spittoons, Nos. 4 and 5..... 4.00
No. 5 Saliva Ejector and Saliva Ejector and Syringe, combined..... 7.00
Syringe attachment, separately 4.00
Improved connection for Saliva Ejector mouthpieces..... .75

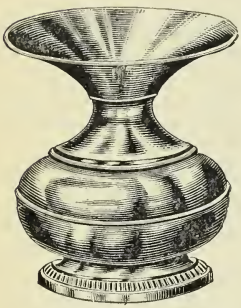


MOUTHPIECES FOR SALIVA EJECTOR.

Plain glass mouthpieces, made in clear glass, also in amber, blue and white, per doz....$0.50; each .05
Simonson's Improved glass mouthpieces, bent as shown, with opening at A, to prevent obstruction by mucous membrane, per doz...$1.00; each .10
Roosa's metal mouthpiece, easily sterilized. Eliminates risk of breakage..... each .75

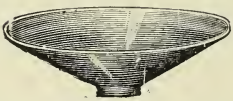
Cuspidors for Dental Chairs.

Made by H. D. Justi & Son.

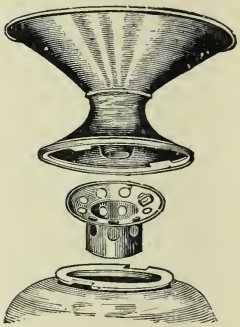


No. 1.
Heavy Spun Brass,
Nickel-plated.

Glass Funnel for No. 2.

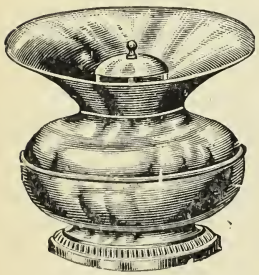


Glass Funnel for Nos. 1 and 4.



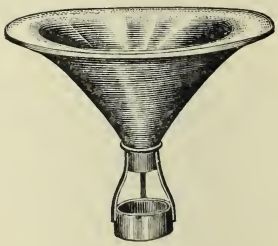
Section of No. 1, showing fastening.

Cap and Gold Catcher
for No. 2.



No. 2.
Spun Brass. Nickel-plated.

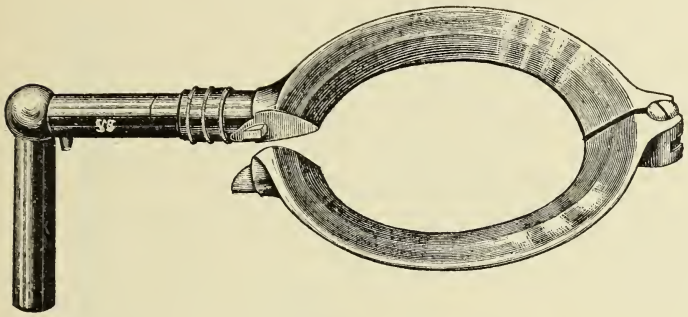
Spun Brass, Nickel-plated.



Nickel-plated Funnel, 3 sizes, 9½, 10,
and 10½ in. diameter., 5 ⅜ in. deep.

Prices of Cuspidors and Accessories.

No. 1, including Gold Catcher	$4.00
" 2, " " " and Cap	1.50
" 3, including Gold Catcher	4.00
Glass Funnels, either style	.75
Nickel-plated Funnels	each, 2.00
Gold Catcher for Nickel-plated Funnel	.50
" " and Cap for No. 2	.50

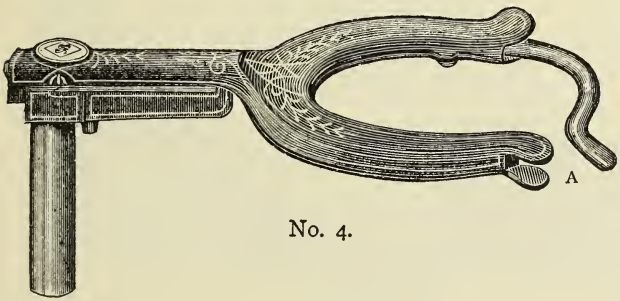


No. 1.

Cuspidor Brackets.

No. 1. Well finished, strong and durable. The hinged joint and the locking device with projecting support are very valuable features.

Price, without socket, $5.50.



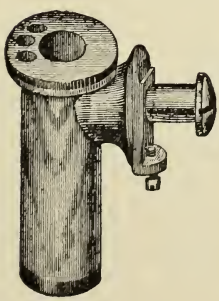
No. 4.

No. 4. Opened or closed by slight push at A. No possibility of accidental opening.

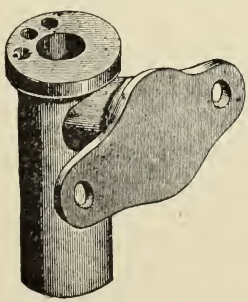
Price, without socket, $2.50.

Sockets for Cuspidor Brackets.

No. 1, for Wilkerson, Pedal-Lever, Cycloid and Duplex Chairs ..... each $0.50
No. 2, for Wood-frame Chairs ..... " .50
No. 3, for Morrison Chairs ..... " 1.50



No. 1.

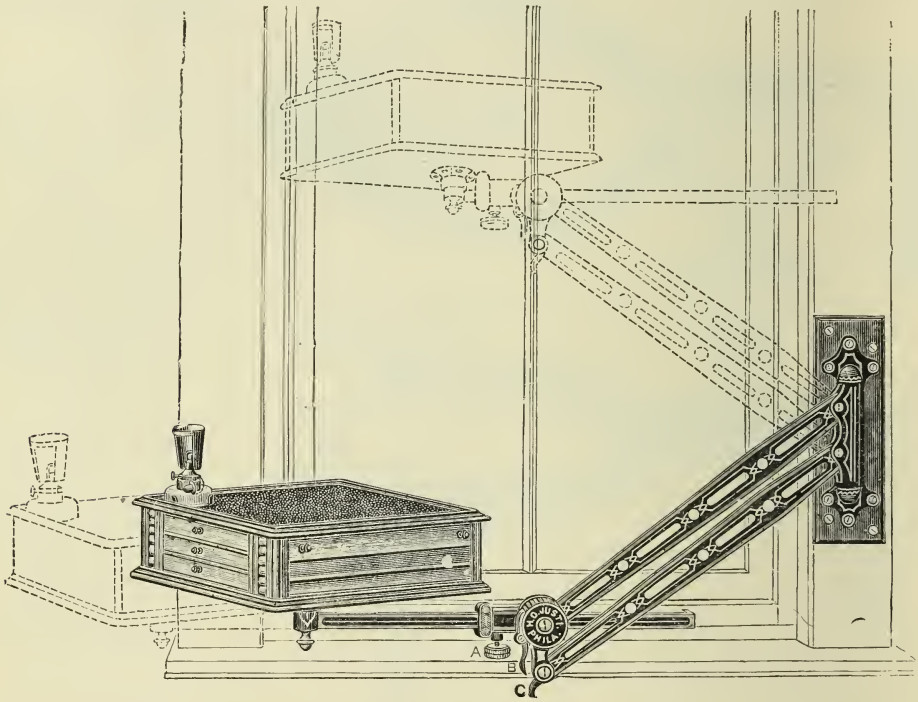


No. 2.

No. 3.

The Handy Bracket.

Made by H D. Justi & Son.



There's a story told in the above picture that would require a whole book if told in words.

It is a story of combined conveniences. It is a story of improvements and progress. It is a story of a thousand and one dental bothers and worries done away with.

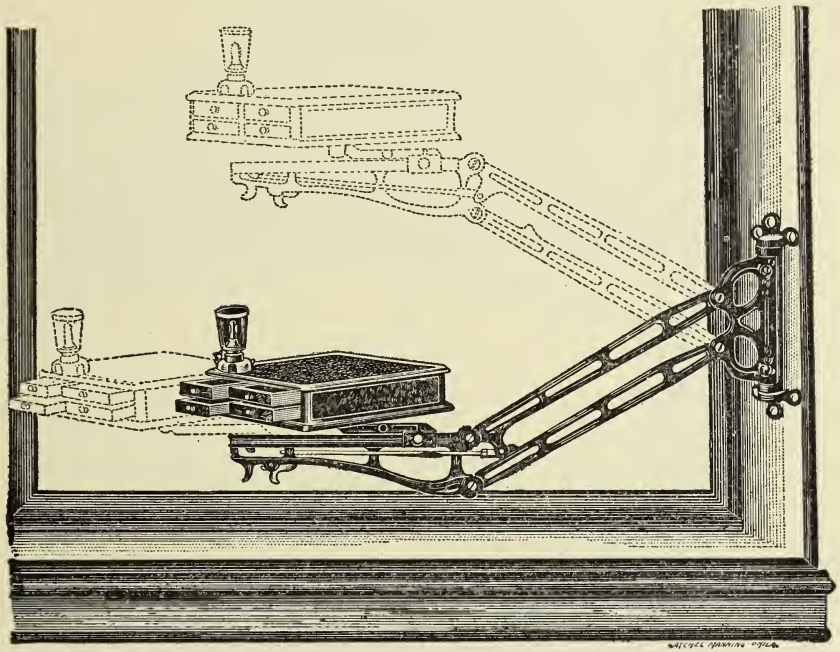
The Handy Bracket does what you want it to do. It goes up, down, sideways, around. It stays where you want it to stay. It will stand an astonishing amount of ill usage, and it will give an equally astonishing amount of satisfaction.

The Grigg Table shown in the illustration, is described on page 102.

PRICES.

Handy Bracket with Table No. 1	$12.00
Handy Bracket with Table No. 2, Lamp and Shield	14.00
Handy Bracket with Grigg Table, Lamp and Shield	24.00
Small Table No. 1, covered with Cloth or Leather	3.00
Small Table No. 2, covered with Cloth or Leather, Lamp and Shield	5.00
Allen Table, Plain Sides, covered with Cloth or Leather, Lamp and Shield	9.00
Allen Table, Glass sides, covered with Cloth or Leather, Lamp and Shield	12.00
Grigg Table covered with Cloth or Leather, Lamp and Shield	15.00

The "Sibley" Wall Bracket No. 1 and Table.



As will be seen from the above illustration, this Bracket gives ample range to the Table, and the ease with which it is adjusted to the various positions required in operating has made it exceedingly popular.

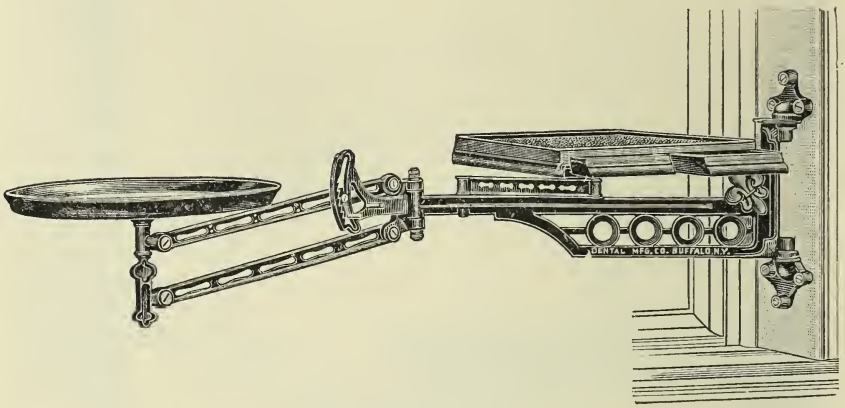
The cut represents the lowest position; to adjust to any higher level, simply lift it to the height required, and the Trigger automatically engages the notched Extension Rod, firmly holding it where placed. To lower it, place one hand against the support near the end of the Bracket, draw the Trigger with the finger, and when the Table reaches the desired position release the Trigger, which locks and holds it securely.

The Bracket is japanned black, decorated and bright parts nickel plated.

PRICES.

The "Sibley" Wall Bracket, No. 1, without Table, Lamp and Shield	$10.00
Bracket, No. 1, with plain Walnut Table, without Lamp and Shield	14.00
" " " Allan Table, plain sides, oak or walnut, without Lamp and Shield	16.00
" " " Allan Table, glass sides, oak or walnut, without Lamp and Shield	18.00
" " " extra quality, Allan Table, plain sides, oak or walnut, with Lamp and Shield	20.00
" " " extra quality, Allan Table, glass sides, oak or walnut, with Lamp and Shield	22.00
" " " Holmes Table, Lamp and Shield, in oak, walnut or mahogany	32.00

B. D. M. Co.'s Two-Table Bracket.



Patented December 10, 1895.

This Bracket is made wholly of iron, japanned and ornamented. As will be seen in the illustration, it is furnished with two tables, a feature not presented in any other bracket. The second table is carried on an arm that is attached to, and swings on, the main frame, and can be extended towards the operator about nine inches. Attached to the outer end of the frame are parallel arms, supporting the main or working table, swinging horizontally, and capable of being raised or lowered and sustained in position by a segment and pawl.

This arrangement of two tables or trays on the same bracket is believed to be convenient and desirable, as it affords abundant space for all instruments within easy reach of the operator, and obviates the necessity of opening or closing the table drawers over the lap of the patient.

The square table is black walnut, and has two drawers extending through, and opening from either side, for holding files and other small instruments. The round or rose table is made of papier-mache, without drawers, and is beautifully ornamented with sprays of roses.

The B. D. M. Co.'s Bracket is sent out with a round table, and a square table containing two long drawers. It can, however, be furnished with any of the square tables—in place of the one shown above—now in market at the list-price of such tables.

The length when extended in a straight line is about four feet.

PRICES.

B. D. M. Co.'s Two-Table Bracket, complete as shown in the illustration. $13.50
B. D. M. Co.'s Two Table Bracket, without square table..... 11.00

Samuel A. Crocker & Co.'s Brackets and Tables.

Allan Table.

Veneered Sides, - - $6.00
Beveled Glass Sides, - 8.00
Lamp and Shield, - - .70

Student Bracket.

This is the best bracket in the market for the money. Japanned Arms, Nickel Plated Bar Slides in and out. Black Walnut Table with two drawers.

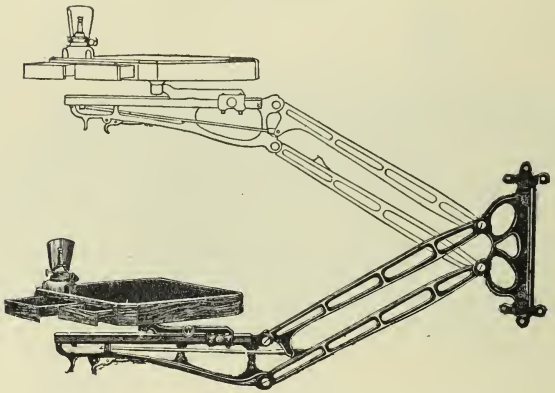
Price, - - - - - $10.00
With Allen Table, - - 14.00
Glass Sides, - - - - 16.00

Cone Journal Boss Bracket.

This is the most convenient bracket made. All metal parts Nickel Plated. Bar slides between four rollers. C, the clamp, can be regulated for any load. The Allan Table works fine on this bracket.

Price with small table, - - - $20.00
Price with Veneered Allan Table, - 23.00
Price with Glass Side, Allan Table, 25.00

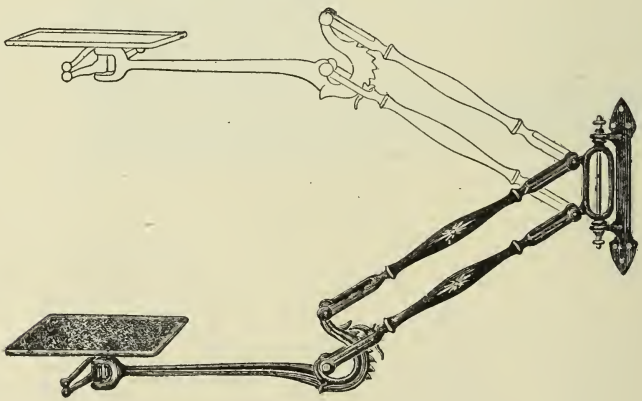
White's Tool Bracket No. 1.



PRICES.

Japanned, without Table	$10.00
With Imitation Rosewood Table	16.00
With Plain-side Allan Table, Walnut or Oak	20.00
With Plain-side Allan Table, Mahogany	22.00
With Glass-side Allan Table, Walnut or Oak	22.00
With Glass-side Allan Table, Mahogany	24.00
With Holmes Table, Walnut or Oak	40.00
With Holmes Table, Mahogany	43.00
Alcohol Lamp and Shield is included in the above prices. Boxing	.50

White's Tool Bracket No. 2.



The table shown is made especially for this bracket. It is a plain tray, 12 inches square, with raised rim, no drawers.

Price, complete as illustrated $10.00

Linen Covers.

For Imitation Rosewood Tables	each $. 90
For Allan Tables	each 1.10
For Holmes Tables	each 1.20

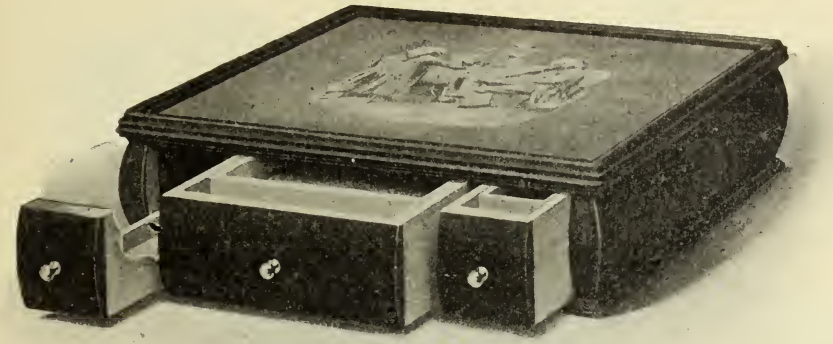
Table Pads.

You can preserve the cover of your Table, keep it fresh looking and free from stains, by using a Table Pad. Made of Paper Fiber Lint, with "pinked" edges. They are neat and useful, and really ornamental.

Price, for Allan Table	each $ .10
Price, for Allan Table	per doz. 1.00
Price, for Holmes Table	each .12
Price, for Holmes Table	per doz. 1.20

No. 5 Bracket Table.

Made by The Ritter Dental Mfg. Co.



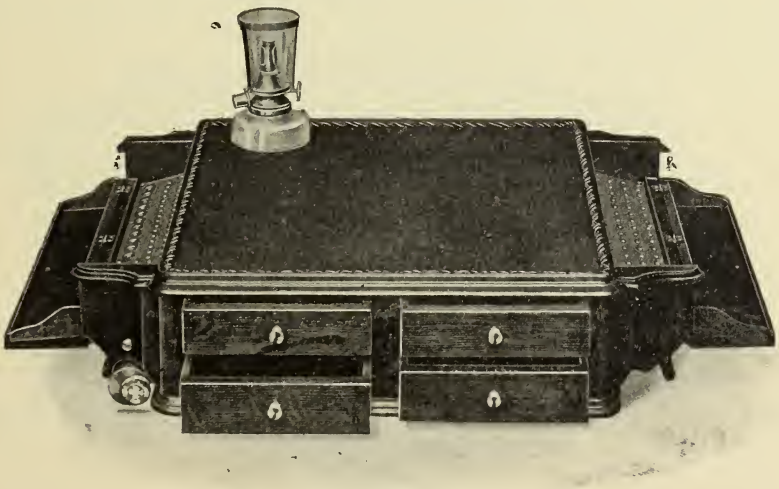
This table contains three drawers, opening from either side. The middle, large drawer has two sliding trays in it. One of the other drawers also has a sliding tray and the third contains holes for holding engine burs and discs.

The top is a beautiful landscape painting on the under side of the glass plate, making the top easy to keep clean.

Price in mahogany only.....$15.00

Holmes Table.

Made by The Ritter Dental Mfg. Co



This table we make in oak, walnut or mahogany, selected woods and very highly polished. It is 18 inches long, 15½ inches wide and 4¼ inches deep. The four drawers open from either end. The wings on each side contain nickel-plated racks for engine burs and discs. On one side is a nickel-plated cotton holder containing a spring which always pushes the cotton forward.

The Holmes Table is too well known to require further description.

Price, including lamp and shield.....$22.00

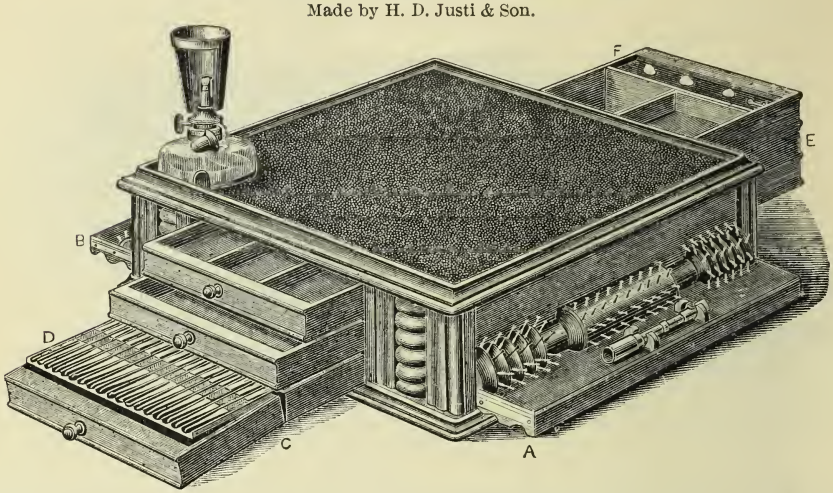
Holmes Table.

Made by the S. S. White Dental Mfg. Co.

Price, Walnut or Oak.....$30.00
Price, Mahogany.....33.00

The T. H. Grigg Bracket Table.

Made by H. D. Justi & Son.



The first thing to recommend the Grigg Bracket Table is its size. It isn't too big to be in the way, and it isn't too small to be useless. Its size is just right.

No convenience is omitted that it ought to have, and none is present for which there is no actual need.

The Tables are made of Oak, Walnut and Mahogany. The wood won't shrink or expand or warp, because it is thoroughly seasoned. This means that none of the drawers will be contrary. They will come out easily when you pull, and go back just as easily when you push.

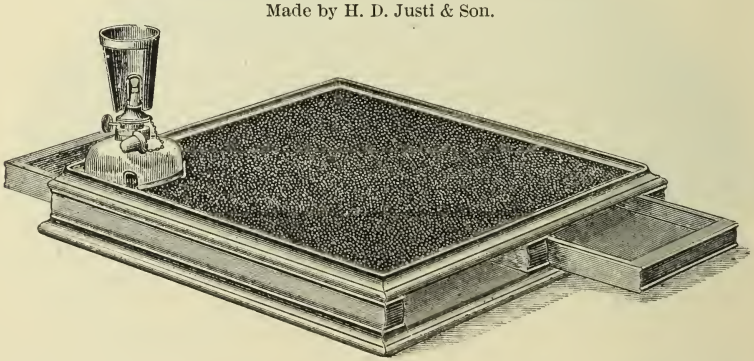
There's a place for everything in it. A dentist can do his work better, more quickly, more satisfactorily to his patient with this Table than with any other. No question about it.

Send for a circular that does the Table fuller justice.

Grigg Table, covered with Cloth or Leather, including Lamp and Shield.....$15.00

Bracket Tables Nos. 1 and 2.

Made by H. D. Justi & Son.



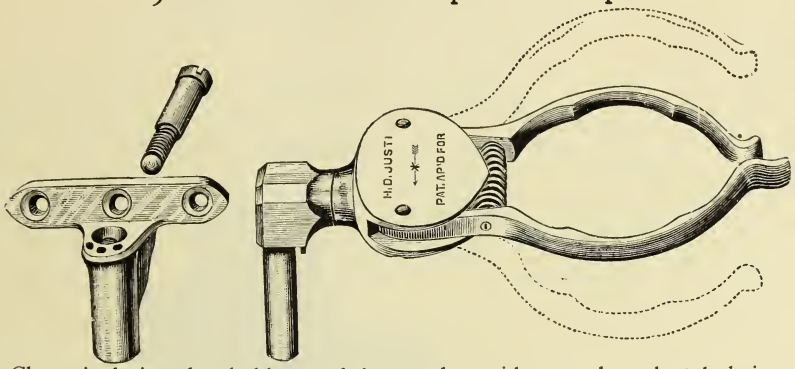
No. 1 is a plain Table, covered with fine cloth or leather. It contains two drawers, which extend the entire length of the table, and can be opened from either end.

No. 2 (see cut) is modeled after the No. 1 Table, of the same dimensions and general utility. But it is of much finer finish, and constructed in the same manner as the Grigg Table, namely: to prevent shrinkage and insure the utmost durability; it is also provided with the same beveled moulding, dispensing with the cord formerly used, leaving no place for dust to accumulate.

PRICES.

No. 1 Table, Walnut, covered with cloth or leather.....$3.00
No. 2 Table, Walnut or Oak, covered with cloth or leather, including Lamp and Shield.. 5.00

Justi's Universal Cuspidor Clamp.



This Clamp is designed to hold any of the metal cuspidors used on dental chairs.

As dentists are aware, these cuspidors, made by different persons, vary much in size; and having bought one of the common clamps with a cuspidor to fit, he is extremely likely to find the next one he buys will be too small to be held securely or too large to enter the clamp at all.

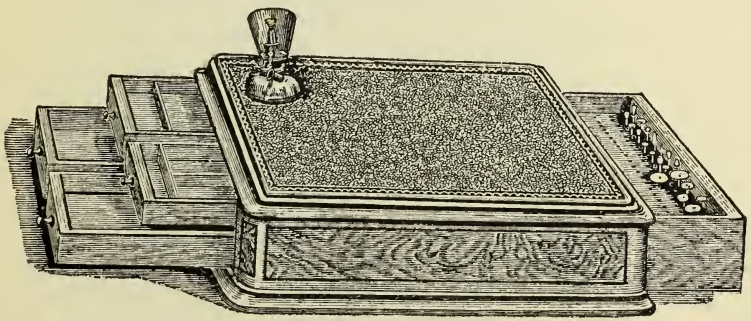
By purchasing Justi's Universal Cuspidor Clamp all the trouble is avoided.

The jaws of the Clamp have a wide range of motion, as will be seen by the dotted lines in the cut, and by the spring they are firmly closed upon the Cuspidor, so that there is no danger of its being thrown out by accident.

Price, including Socket for Columbia, Wilkerson or Archer Chair.....$3.00
Price, including Socket for Morrison Chair..... 4 00

Allan Bracket Table.

Made by H. D. Justi & Son.



Made in Walnut, Oak and Mahogany.

PRICES.

Plain Veneered Sides, including Lamp and Shield.....$ 9.00
Beveled Glass Sides, including Lamp and Shield..... 12.00

Bracket Tables.

Made by The S. S. White Dental Mfg. Co.

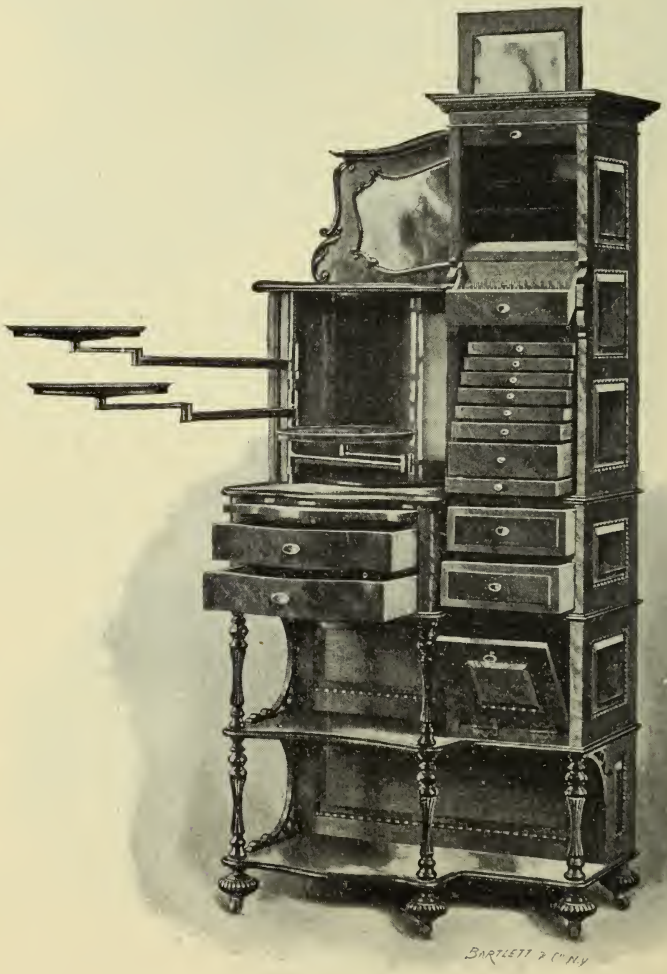
PRICES.

ALLAN TABLE.
Plain Veneered Sides, Walnut or Oak, including Lamp and Shield..... ...$10.00
Plain Veneered Sides, Mahogany, including Lamp and Shield..... 12.00
Beveled Glass Sides, Walnut or Oak, including Lamp and Shield..... 12.00
Beveled Glass Sides, Mahogany, including Lamp and Shield..... 14.00
IMITATION ROSEWOOD.
Table as shown on page 100..... 6.00
TABLE FOR NO. 2 BRACKET.
With Socket for No. 2 Bracket, as shown on page 100..... 3.00

Cabinet No. 65.

Patented Jan. 10th, 1899, Feb. 21st, 1899.

Manufactured by The Ransom & Randolph Co., Toledo, Ohio.

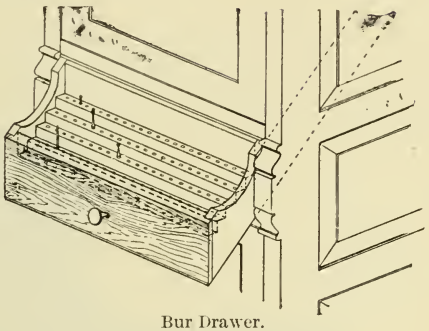


Our No. 65 cabinet contains more practical and desirable features than any other. It is replete with astonishing conveniences. Three extension brackets are contained in a circular compartment, which is closed by a semi-circular bent crystal glass door. The revolvable bracket tables are covered with cabinet cloth. Under the bracket compartment is a slide, and under the slide are two swell front drawers for forceps, etc. The medicine closet is entirely separated from, and above all instruments, and has a door with a beveled mirror panel.

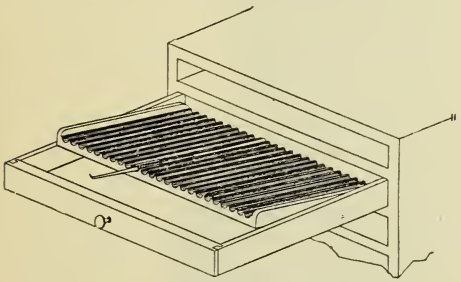
Cabinet No. 65.—Continued.

The bur drawer slides under and behind the medicine closet at an angle of about 30 degrees, and drops opposite the operator's eye at a touch of the hand. The bur rack is in five ascending rows. Under the bur drawer is a space for disposing of the glass door which closes over and protects the instrument drawers. This door has a beveled glass panel and slides into its place of concealment at the same angle as the bur drawer.

Below the glass door is a tier of trays for instruments and small supplies.



Bur Drawer.



One of the Trays for Long Handle Instruments. Patented Feb. 21st, 1899.

The upper three trays contain racks for long-handled instruments, and have a mechanism by which the points of the instruments are automatically raised and exposed above the tray front when open.

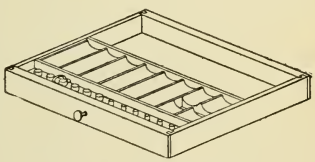
The fourth tray contains a row of wooden pins for dam clamps and a row of shallow compartments, concave in shape, for nerve broaches, separating files, corundum and rubber points and other small instruments which are difficult to pick up.

The fifth tray is designed for clamp forceps, dam punch, wedge cutter, pliers, etc. The sixth tray is for shears, mallets, separators, etc.

The seventh tray is for gold, alloy, chip syringe and other bulky goods.

The lower tray is ingeniously arranged for strips and disks.

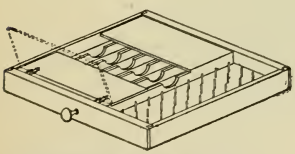
The tier of trays mentioned, with the exception of the strip and disk tray, is contained in a separate polished wooden box, which may be withdrawn from the cabinet and used as a portable case. This smaller case is provided with an ingenious locking device and a brass handle for carrying.



Drawer for Nerve Broaches and other Small Instruments.

Under the tier of trays are two drawers for linen, and a compartment under the latter drawer is intended for soiled linen and has a self-closing door.

The two forceps drawers and the two linen drawers are automatically locked when the door over the instrument trays is closed, and this door is provided with a good cylinder lock.



Drawer for Strips and Disks.

The interiors of bur drawer, medicine closet and all small trays are made of fine cabinet woods, and all portions of the interior which are exposed to view when the cabinet is open, are well finished. All drawer sides are of hard wood, and when practicable, drawer bottoms are covered with cabinet cloth. The trimmings are of special design, very artistic and attractive.

We take pains to put a very fine and durable finish on these cabinets, and the back, which is built of the same wood as the front and sides, is paneled and finished.

The cabinet stands on five castors.

DIMENSIONS.—Height, 6 feet 2 inches; width, 2 feet 9½ inches; depth, 1 foot 10 inches

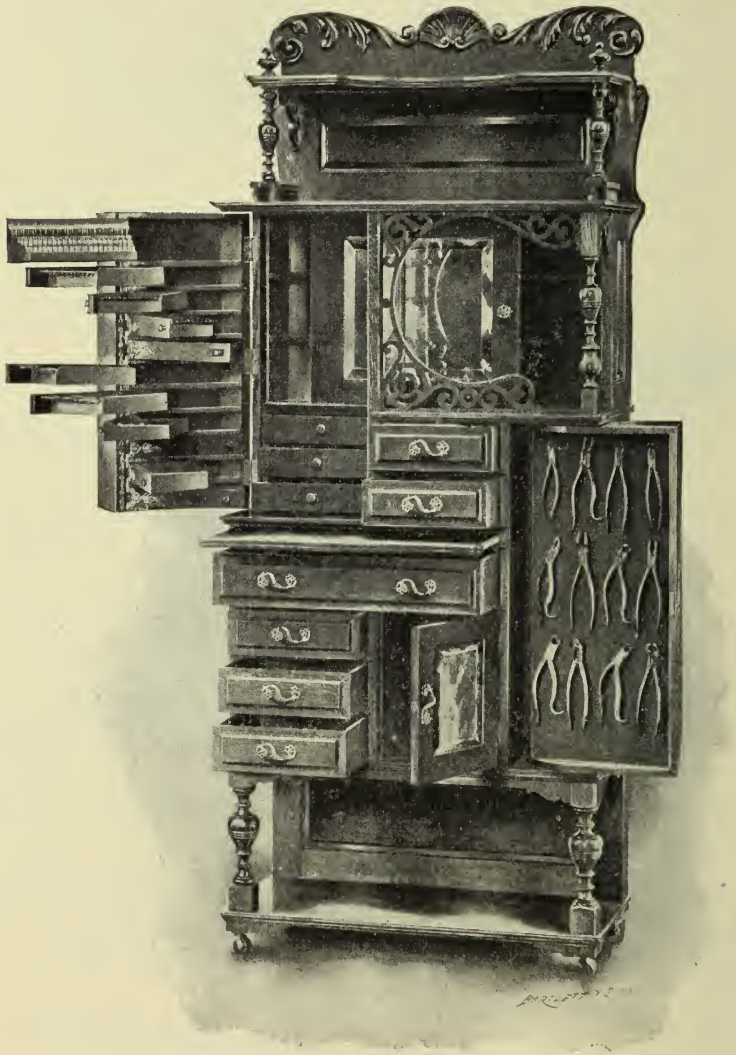
PRICES.

No. 65 Cabinet, Mahogany	$105.00
No. 65 Cabinet, Walnut	100.00
No. 65 Cabinet, Oak	90.00

Cabinet No. 75.

(Patented December 4, 1894.)

Manufactured by The Ransom & Randolph Co., Toledo, Ohio.

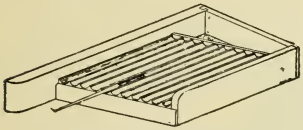


The lines of this cabinet are so refined and modest, producing such a pleasant effect, that from the first its popularity has been assured.

In the upper left corner is a swinging section containing ten swinging drawers hinged at the left front corner, a supporting hinge having been designed especially for the purpose. The hinge is ornamental, strong and rigid and will not allow the drawers to sag. The bottoms of six of these swinging drawers are made of grooved blocks, slightly inclined from front to rear, for pluggers, excavators and other long instruments, the handles only of which are in contact with the grooves, the shanks and points extending beyond and being freely accessible.

Beneath these instrument drawers is another, the bottom of which is a solid wooden

block, into which two circular depressions are turned and four large grooves cut. These depressions are convenient as receptacles for the many small supplies used by a dentist, and render the selecting of minute articles easy and rapid.

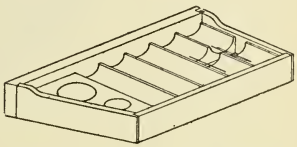


One of the Trays for Long-handled Instruments.

Three drawers without divisions, complete the series of drawers proper in the swinging section, and are intended for the clamp-forcep, punch, wedge-cutter, pliers, etc.

The hinge arrangement and the manner of placing instruments enables the operator to have every drawer open simultaneously, thus bringing the points of all the instruments in sight and within easy reach.

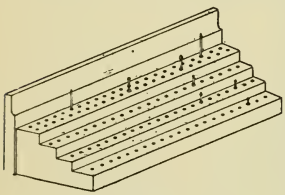
Above the ten drawers described is a bur block having the same hinge arrangement, and made with a series of steps into the threads of which holes are bored for hand-piece and right angle burs and drills.



Drawer for Nerve Broaches and other Small Instruments.

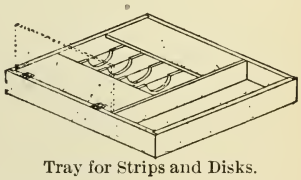
The swinging section containing the ten swinging drawers and the bur block, closes upon three shelves and three drawers intended for gold, alloy and general supplies. The closing of the lower drawer works a device which effectually locks all the larger drawers.

The medicine case is in the upper right corner of the cabinet behind a sliding beveled mirror. A partition separates this compartment from the opposite corner of the cabinet, and protects the instruments from the corrosive fumes of the medicines. Beneath the medicine case are two drawers, the upper one of which contains a removable, slidable tray with conveniently arranged divisions for the different grades of strips and for disks. Beneath the tray is ample space for a surplus stock of strips and disks. The lower drawer is intended for rubber dam, and is divided into three compartments. The one in the rear for waste; the middle one, having a hinged cover, for a roll of dam, and the front one for the scissors and unused pieces.

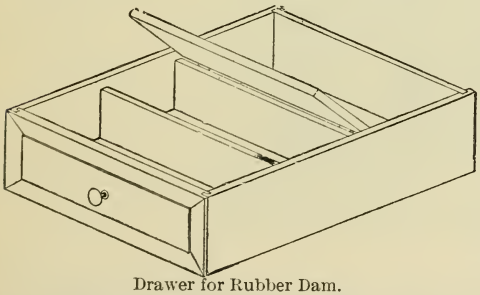


Bur Drawer

The lower right corner of the cabinet has a swinging section containing hooks for forceps. The back upon which the forceps hang is slightly inclined to give them sufficient contact to prevent their swinging when the section is opened and closed. This receptacle for forceps is easier opened than a drawer, and opens noiselessly at the touch of the finger. If a separate extracting room is used, this swinging section becomes available for clamp-forceps, wedge-cutter, dam punch, shears, etc.



Tray for Strips and Disks.



Drawer for Rubber Dam.

A table-slide of convenient height is provided. Under the slide is a large drawer for bulky instruments and supplies. Under this drawer are three smaller ones for clean linen, etc. A cupboard with a beveled chipped glass door is intended for miscellaneous supplies, or may be used as a receptacle for soiled linen.

The cabinet is made of mahogany, of walnut and of quarter-sawed oak with finished back. The cabinet work is of the highest order. Every detail, no matter how trivial it may seem, is carefully looked after. All open sawed work is of three-ply wood to insure strength and stability. Every visible surface in or upon the cabinet is superbly finished. All trimmings are fire gilt and will not tarnish. All portions of the interior which are exposed to view when the cabinet is open, are lined with a wood affording a pleasing contrast with the exterior. The mahogany cabinets are lined with white and bird's-eye maple, and the walnut and oak cabinets are lined with solid mahogany and properly finished.

DIMENSIONS.—Height, over all, 76½ inches; width of cabinet, when closed, 30 inches; width of cabinet when opened, 47 inches; depth, 15 inches.

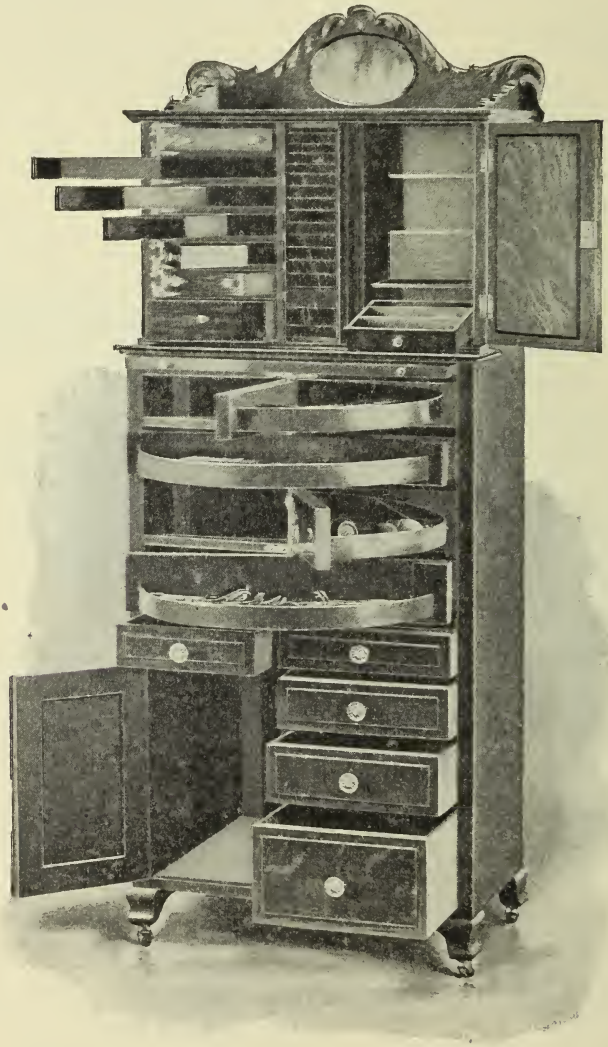
PRICES.

Mahogany	$100.00
Walnut	95.00
Quarter-Sawed Oak	85.00

Cabinet No. 40.

Patent Pending.

Manufactured by The Ransom & Randolph Co., Toledo, Ohio.

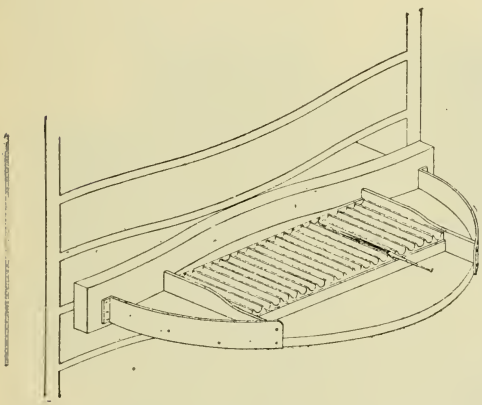


There are at least four characteristics in this piece of furniture which make it a favorite with the Dental Profession: Its novel drawer arrangements, its convenient medicine compartment, its simplicity of design and mechanism, and a rich appearance, which is emphasized by a graceful swell front, a harmonious selection of trimmings and the best of finish.

Two features entirely new in Dental Cabinets are embodied in it. One is a series of semi-circular trays for instruments. These trays, when closed, have the appearance of drawers. When open they are entirely outside of the cabinet, and the instruments upon them are in the most convenient and accessible situation.

Cabinets—Description.

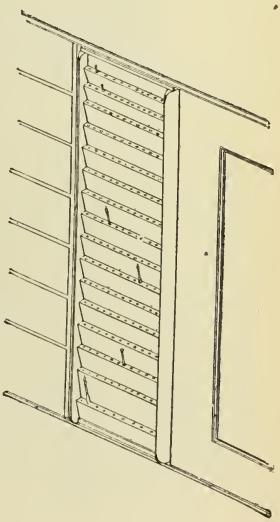
The upper tray has a rack for excavators; the next tray has a rack for pluggers. The excavating instruments may be entirely put out of the way when they are no longer needed, and the plugging and finishing instruments may be swung out of the cabinet, ready for use.



The lower two trays are for forceps and for bulky tools and material. These trays swing on a pivot concealed within the drawer front. They are easier opened than drawers, cannot fall to the floor, and are so rigid that they cannot sag.

The other new feature is a rotating bur block, situated at a convenient height, and with a capacity of 20 long shank instruments, 110 burs and 30 right angle instruments in sixteen ascending rows. These instruments, when in the block, stand at a convenient angle, and may be easily withdrawn.

On the right of the bur block is the medicine closet, containing three shelves and a tray for bottles. The door of the medicine closet has a beveled French mirror panel. On the left of the bur block are six swinging drawers for miscellaneous small instruments and materials, and under the six swinging drawers is a sliding drawer suitable for gold, etc., which when closed automatically locks the rotatable trays and all the drawers beneath them. When the bur block is closed, one edge slightly laps the ends of the swinging drawers and the gold drawer, and by turning the key in the lock of the medicine closet door, the bur block effectively locks the entire cabinet, except the closet for soiled linen. The bur block when closed shows a raised panel.



Rotating Bur Block.

In the base of the cabinet are two drawers for clean napkins and towels, a cupboard for soiled linen, and three other drawers for supplies.

The trimmings on this cabinet, including the hinges, are fire gilt brass, and will not tarnish. The workmanship is of the highest order, and the finish is elegant and durable. In workmanship, finish, convenience and appearance, it surpasses any other cabinet ever before offered for the same price.

Height (not including top ornament), 4 feet, 9 inches; height, over all, 5 feet, 5 inches; width, over all, 2 feet, 2 inches; depth, over all, 1 foot, 5 inches.

Made of mahogany, of walnut, and of quarter-sawed oak, with paneled and finished back.

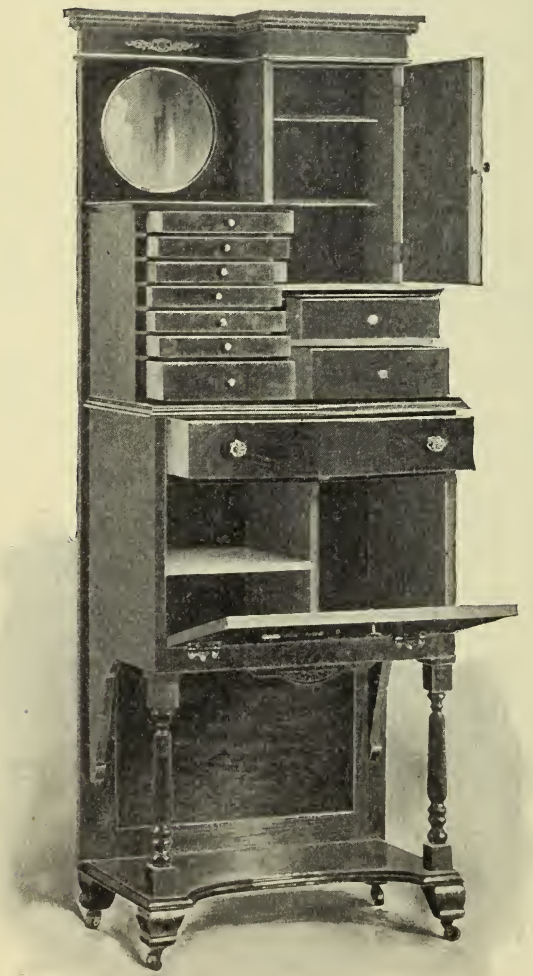
PRICES.

Mahogany	$60.00
Walnut	55.00
Quartered Oak	50.00

Cabinet No. 28.

Patent Pending.

Manufactured by The Ransom & Randolph Co., Toledo, Ohio.



This is an entirely new design, very much more attractive than any other cabinet heretofore made for the same price. It is admirably adapted to the extracting room, though adequate for the operating room. Our aim, when designing this cabinet, was to produce a good, well-built and handsome piece of office furniture at a very low price.

The style and finish is on a plane with higher priced goods, though it lacks the internal conveniences contained in our better cabinets.

On the left there is a tier of six shallow drawers for small instruments, and under them a deeper drawer for larger instruments, such as chip-blower, not air syringe, etc.

The two drawers on the right are intended for rubber dam, cotton, bibulous paper, strips, gold and other supplies.

Above these two drawers is a medicine closet, entirely separated from the other compartments in the cabinet, so that the corrosive fumes of the medicines cannot effect the instruments.

The oval panel in the door of the medicine closet is fitted with a French plate mirror, and another French plate mirror surmounts the tier of instrument drawers.

The swell-front drawer is intended for forceps, and the compartment under the forcep drawer is divided into three spaces by a vertical partition near the center and a horizontal partition in the larger part. This provides a place for clean napkins, clean towels and soiled linen.

Made of quarter sawed oak.

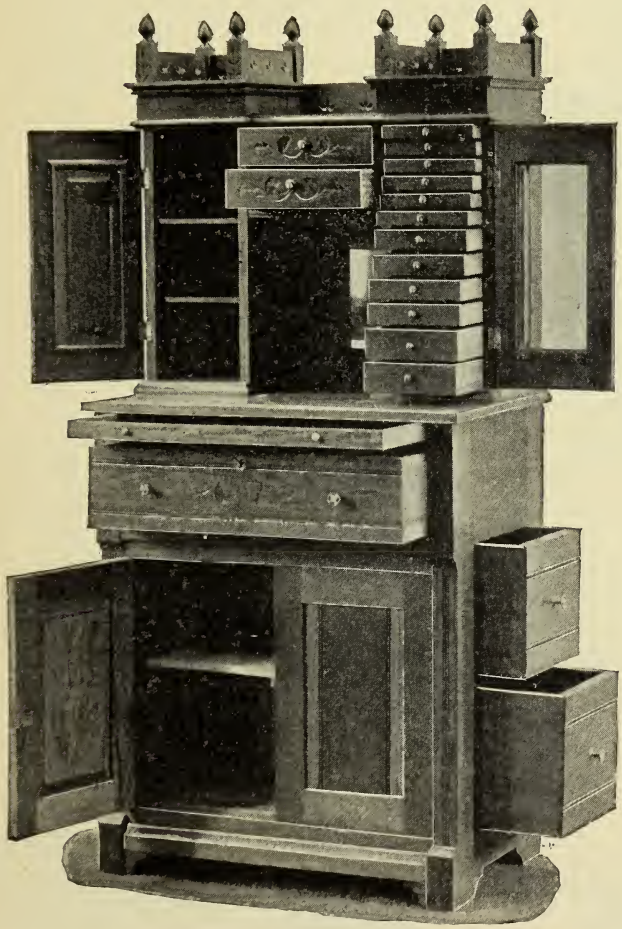
Ornamented with fire gilt trimmings and provided with lignum-vitæ castors.

Height, 5 feet 8 inches; width, 2 feet 1½ inches; depth, over all, 16½ inches. .

Price.....$30.00

Cabinet No. 10.

Manufactured by The Ransom & Randolph Co., Toledo, Ohio.



This cabinet was the first popular cabinet put on the market, and its popularity was an incentive to imitation. But our No. 10 cabinet has steadily maintained its lead over imitations because of the superiority of workmanship and finish.

Under the two drawers connecting the two wings of the top is a beveled mirror. The medicine case on the left is entirely separated from any other compartment of the cabinet. The instrument drawers on the right are removed and securely protected against corrosive fumes from the medicines. The shallow drawer under the top is lined with cabinet cloth The larger drawer under this is intended for forceps and contains a sliding tray, increasing the capacity of the drawer 50 per cent.

We also make this cabinet with the two lower drawers in the base opening from the front instead of the end

The panels in the two doors of the top are ordinarily of wood, but we substitute a plate of beveled French glass in the door closing over the instrument drawers and a beveled mirror in the door of the medicine case, if so ordered.

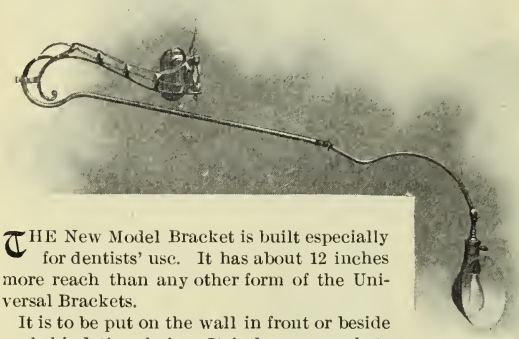
We build these cabinets of oak and walnut, trimmed with bright cast brass trimmings.

Dimensions.—Height, over all, 5 feet 3 inches; height of base, 3 feet; width, 2 feet 6 inches; depth, 18 inches.

PRICE

No. 10 Cabinet, Oak, with wood top and wood panels in doors	$32.00
No. 10 Cabinet, Oak, with wood top and glass panels in doors	34.00
No. 10 Cabinet, Walnut, with wood top and wood panels in doors	33.00
No. 10 Cabinet, Walnut, with wood top and glass panels in doors	35.00
For Marble Top on No. 10 Cabinets, add	3.00

New Model Bracket.



THE New Model Bracket is built especially for dentists' use. It has about 12 inches more reach than any other form of the Universal Brackets.

It is to be put on the wall in front or beside or behind the chair. It is long enough to reach the chair, no matter how far away it is from the wall or window. The reflector concentrates the light of the lamp. It throws all the light in one direction.

It throws actually more light in the patient's mouth than if the light was inside instead of outside.

The shade keeps the light out of the operator's eyes.

Thousands of dentists will testify that if this bracket is used they can operate just exactly as well as in broad daylight.

When the light is not in use the bracket can't by any possible chance be in the way. It doesn't take up any room in the office. It folds up against the wall. When it is wanted it takes one hand to get it.

There isn't a ratchet, or a spring, or a screw about it. Just reach for it. Put the light where it is wanted and let go of it. It stays where it is put.

The New Model Bracket is an ornament to any dental office. It is a work of art.

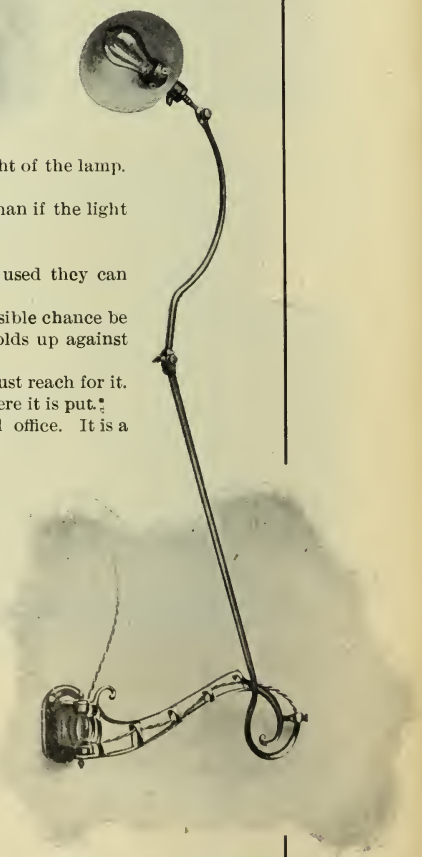


FIG. 2.

Showing new crook n extension arm with shade turned in. Turning shade out adds about twelve inches to length of bracket.

Lee S. Smith & Son, Sole Agents, Pittsburg, Pa.

New Model Bracket.—Continued.

When fully extended the light is 6 feet 4 inches from the wall. It may be swung 5 feet 8 inches on either side. It reaches 4 feet 5 inches up or down.

There isn't a spot in that entire space that the light can't be put and made to shine in any conceivable direction.

PRICES:

Polished Brass, - - -	$5 85
Copper Oxidized, - - - -	5 35
Japanned with Brass Arm, -	4 00

Prices include polished aluminum shade shown in figure 2, but do not include lamp socket or cord.

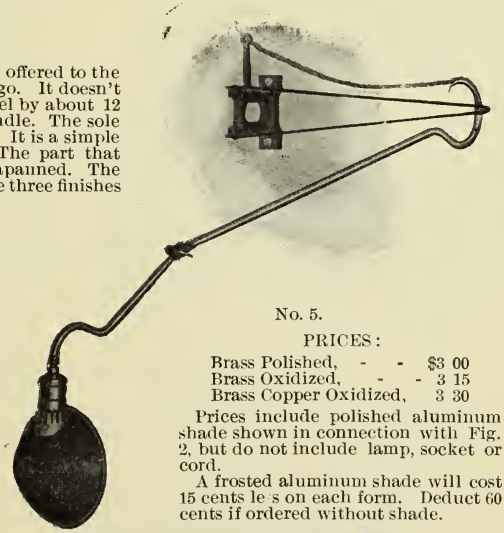
A frosted aluminum shade will cost 15 cents less on each form.

Deduct 60 cents if ordered without shade.

Showing crook in middle section of bracket. The position of the lamp is changed by grasping the crook which is otherwise held in position by the weight of the rod.

Bracket No. 5.

This is the ordinary form we offered to the dental proiession three years ago. It doesn't reach so far as the new model by about 12 inches. It is just as easy to handle. The sole difference is in the appearance. It is a simple form that costs less to make. The part that attaches to the wall is of iron japanned. The extension arm may be any of the three finishes specified.



No. 5.

PRICES:

Brass Polished, - -	$3 00
Brass Oxidized, - - -	3 15
Brass Copper Oxidized,	3 30

Prices include polished aluminum shade shown in connection with Fig. 2, but do not include lamp, socket or cord.

A frosted aluminum shade will cost 15 cents less on each form. Deduct 60 cents if ordered without shade.

Improved Shades for Universal Bracket.

These shades keep the light out of the operator's eyes. They throw it into the patient's mouth. They make daylight out of darkness. Not a ray escapes.

The shades are made in two styles as shown, in both aluminum and steel. The aluminum is black enamel outside, and highly polished inside. It is a perfect reflector, and will be furnished with all brackets unless otherwise ordered. It is made for the dental trade.

The steel shades are green enamel outside, with a white enamel reflecting surface inside.

No. 27.

No. 26.

Price of either form: Aluminum, 60 cents; Steel, 35 cents.

Lee S. Smith & Son, Sole Agents, Pittsburg, Pa.

The S. S. White Dental Mfg. Co.'s Dental Cabinets.

Circulars of these Cabinets will be mailed upon application.

Gothic Pattern.

	No. 1 with Locking Device.	No. 2 without Locking Device.
Walnut or Oak, with White Marble Slab	$118.00	$110.00
Mahogany, with White Marble Slab	124.00	116.00

Tennessee Marble Slab adds $4.00 to above prices.

Eastlake Pattern with Doors or Falling Slide.

Walnut or Oak, with White Marble Slab	$75.00
Walnut or Oak, with Fine Tennessee Marble Slab	77.00
Mahogany, with White Marble Slab	85.00
Mahogany, with Fine Tennessee Marble Slab	87.00

The Model.

		With instrument case and bottle rack.
Walnut or Oak, with White Marble Slab	$70.00	$90.00
Walnut or Oak, with Fine Tennessee Marble Slab	72.00	92.00
Mahogany, with White Marble Slab	72.00	94.00
Mahogany, with Fine Tennessee Marble Slab	74.00	96.00

Number Six.

Oak or Walnut	$60.00
Mahogany	65.00

Office Preparations Case.

These Cases, made of walnut, handsomely finished, and provided with lock and key, have had an extensive sale. They contain eight half-ounce square vials, with flat-top glass stoppers. Outside measurements: 6x3½x3½ inches.

Price, including vials $2.50

Rolling Case for Forceps.

Made of morocco, lined with chamois, strongly made.

PRICES.

5 spaces for Forceps, Instruments, etc.	each	$2.00
7 spaces for Forceps, Instruments, etc.	each	2.25
9 spaces for Forceps, Instruments, etc.	each	3.00
12 spaces for Forceps, Instruments, etc.	each	3.50
15 spaces for Forceps, Instruments, etc.	each	4.50
20 spaces for Forceps, Instruments, etc.	each	6.00
Rolling Case for Burs for Students		.50

Any other size made to order.

Dentist's Visiting Case.

Contains necessary instruments and medicines for emergencies. Just fits the pocket.

Price complete $9.00

Cases for Artificial Teeth.

PRICES.

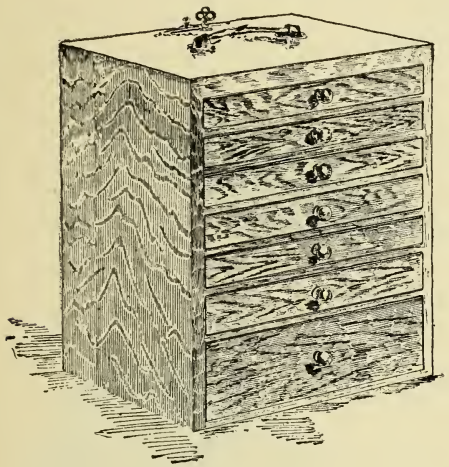
Nos. 1 to 4 are Half Oval, No. 5 is Oval, and Nos. 7 to 9 are Oblong.

1.	Cotton-Velvet lined, 3½x2¾x1½ in., Leather Hinge	each	$0.60
2.	Cotton lined, 3x2½x1½ in., Leather Hinge	each	.60
3.	Satin and Silk-Velvet lined, 3¼x2½x1½ in., Brass Hinge	each	.75
4.	Card-Board, Paper lined, 3x2½x1⅛ in.	per doz.	1.25
5.	Satin and Silk-Velvet lined, 4½x3¼x1¼ in., Brass Hinge	each	1.00
7.	Satin and Silk-Velvet lined, 4½x3½x1⅜ in., Brass Hinge	each	1.00
8.	CardBoard, Paper lined, 4x3x1¼ in.	per doz.	1.50
9.	Card-Board, Paper lined, 3x2½ in.	per doz.	1.25

The above are outside measurements.

Hand Cabinet No. 65.

Made by The Ransom & Randolph Co., Toledo, O.
Patented Feb. 21, 1899.



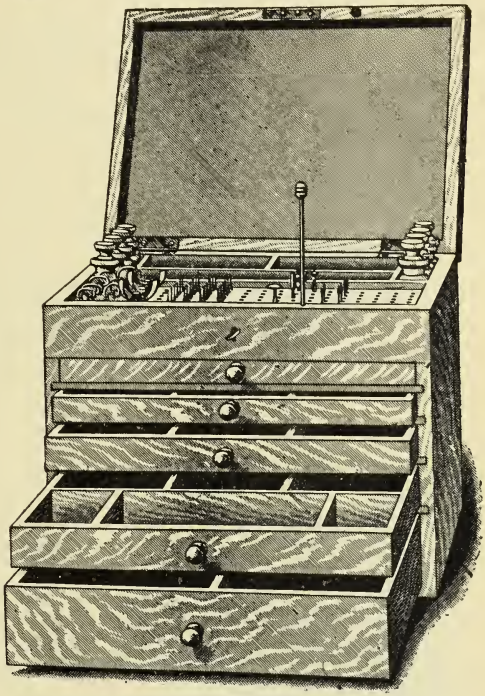
This Cabinet is made as a part of our No. 65 Cabinet, so that the dent st or dental student who buys it purchases part of a complete Cabinet, the balance being furnished at any time. It is supplied with a tray for medicine bottles and a rack for burs. A description of the arrangement of the drawers, etc., may be found on page 104 in the advertisement of Cabinet No. 65.

PRICES.

Mahogany, - - - - - -	$13.00
Walnut, - - - - - - - -	12.50
Quartered Oak, - - - - -	12.00

Hand Cabinet No. 2.

Made by The Ransom & Randolph Co., Toledo, Ohio.



This Cabinet is intended for students and for traveling dentists. It is large enough to hold all operating instruments, including forceps, and has spaces for glass-stoppered medicine bottles and a rack for clamps and engine instruments.

Made substantially of oak, highly finished. All drawers are lined with cabinet cloth, and the case is furnished with an effective locking device and a bra s handle on top. Dimensions: height, 10½ inches; width, 11¾ inches; depth, 8¾ inches.

Prices, including 8 glass stoppered bottles, $8.50

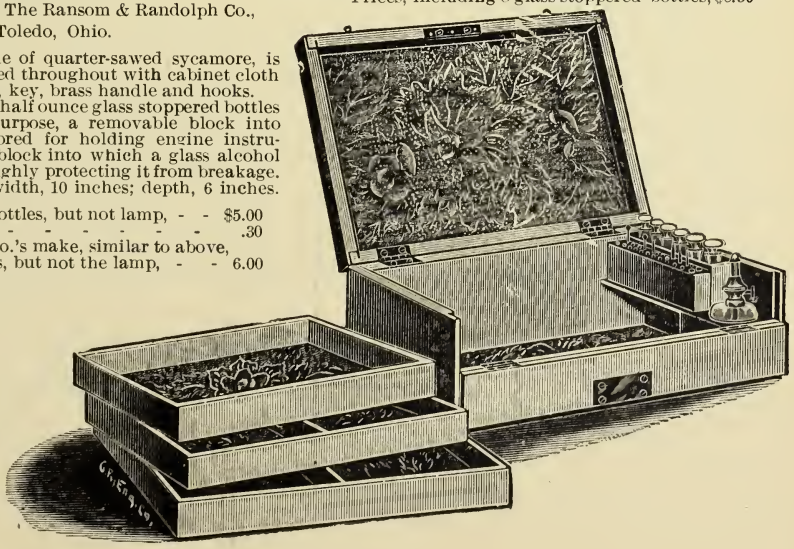
Student's Box No. 1.

Manufactured by The Ransom & Randolph Co., Toledo, Ohio.

This box is made of quarter-sawed sycamore, is highly polished, lined throughout with cabinet cloth and fitted with lock, key, brass handle and hooks.

In the end are 6 half ounce glass stoppered bottles in a space for the purpose, a removable block into which holes are bored for holding engine instruments, and a bored block into which a glass alcohol lamp will fit, thoroughly protecting it from breakage. Length, 13 inches; width, 10 inches; depth, 6 inches.

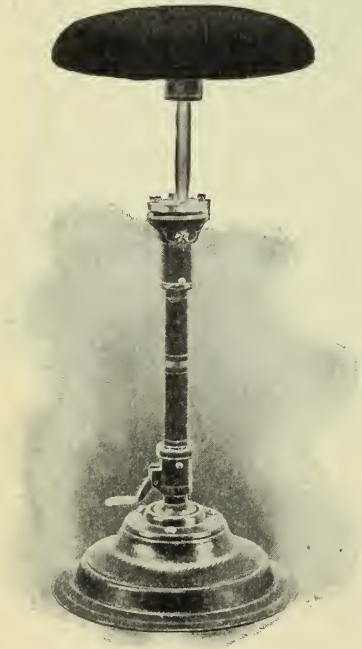
Price, including bottles, but not lamp, - -	$5.00
Lamp, extra, - - - - - - - - -	.30
S. S. White D.M. Co.'s make, similar to above, including 8 vials, but not the lamp, - -	6.00



The Practical Operating Stool.

Patent Pending.

Manufactured by The Ransom & Randolph Co., Toledo, Ohio.



Normal Position.

Inclined Position.

Fatigue impairs a dentist's productiveness, his skill and his health. A tired man cannot do as well for his patients or for himself as he might if he had conserved his strength.

A Practical Operating Stool is a conserver of strength, and its continued or occasional use produces a restful feeling that is unknown to the man who works standing all day.

The stool can be inclined in every direction, forward, backward or sideways, without touching a lever, is self-righting, and the seat can be raised or lowered in an instant.

Range of elevation from 21½ to 31 inches; range of inclination, 33 degrees.

Price $12.00

The Lyon Improved Adjustable Stool.

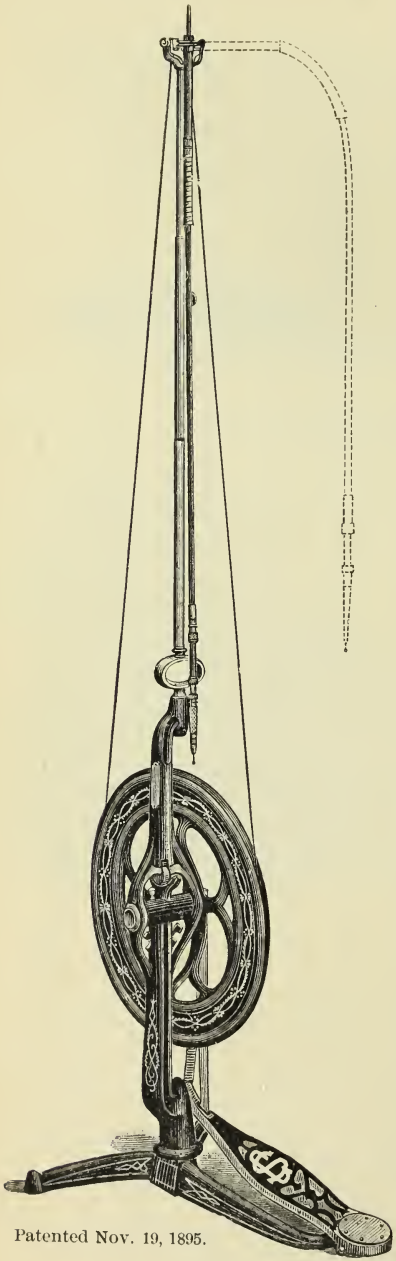
Has a range of 23 to 35 inches from the floor. A lever is provided for changing the angle of the stool.

Price $15.00

ENGINES AND EQUIPMENTS.

Supplies and Materials for the Operating Room.

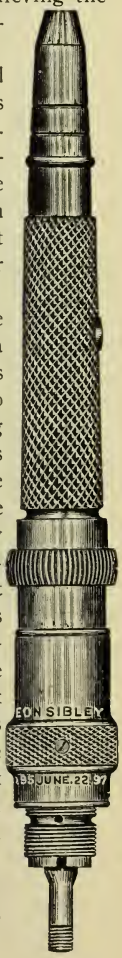
NO PART of our stock is more complete than this part. We are not just publishing a list of Engines and Equipments that are made by different people. We are publishing a list of Engines and Equipments that are actually in our own stock. We don't believe there is a more complete stock of this particular class of goods anywhere in the country than we have here.



Patented Nov. 19, 1895.

The "Sibley" Improved Dental Engine and Universal Hand-Piece.

This is a Side-Wheel, Flexible Cable, Rocking Engine, possessing several unique and distinctively new devices or adaptations thereof, among which the following are especially worthy of mention: new Rocking Upright, which, with the Duplex Spring Connection used gives unusual freedom to the Hand-Piece, almost wholly eliminating vibration, and insuring precision and that delicacy of touch to the operator so essential to good work, by relieving the hand of the strain and tremor that is inseparable from the rigid upright Engine.



The Pully-Head is wholly unlike and superior to any similar contrivance for this purpose. It does away with the old-fashioned ratchet, and by an excellent Cam movement you are enabled to drop the Cable Arm, or raise it to any desired angle with one hand. It is provided with an excellent Arm Support, which prevents break or strain of Cable.

The "Sibley" Hand-Piece, as will be seen from the cut, which is exact size, is a compact, handsomely finished tool. It is thoroughly well made and when in use no oily parts are exposed, the spindle being completely enclosed within the casing, thus preventing the possibility of soiling the fingers of the operator or the face of the patient. The Bur is easily and quickly clamped and firmly held by a universal sectional split Chuck, taking any of the straight shank instruments in common use. This Hand-Piece is fitted to receive the regulation Duplex Spring Connection or the Cable and Sheath direct without the Duplex Spring Connection. It also takes the various style Right Angle Attachments and Engine Mallets, as well as the modern Slip Joint Connection. This forms a complete, well balanced, handsomely made and finished Engine.

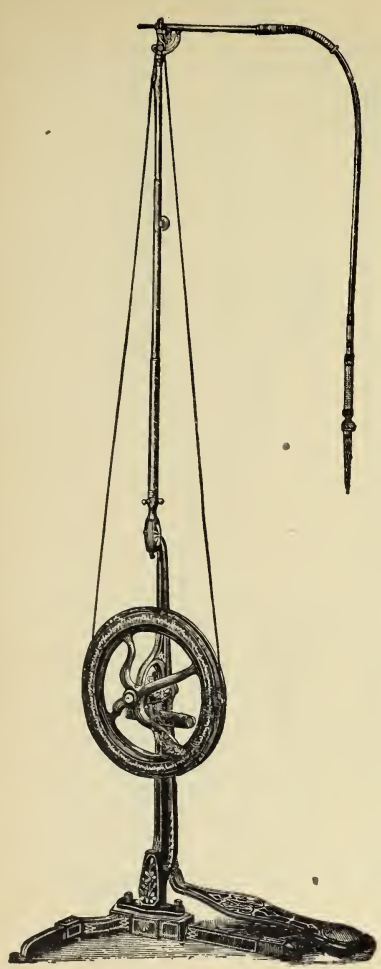
This Engine is made with Drive Wheel of three different sizes and weights, as follows:

"F" Wheel Diameter, 12⅜ inches; weight, about 18¾ pounds.
"G" Wheel Diameter, 12⅜ inches; weight, about 15½ pounds.
"H" Wheel Diameter, 15 inches; weight, about 14½ pounds.

Price of Engine, with either "F," "G" or "H" Wheel, complete with Flexible Arm Support, Duplex Spring Connection, "Sibley" Universal Hand-Piece and fourteen instruments $40.00
Boxing ..... .75

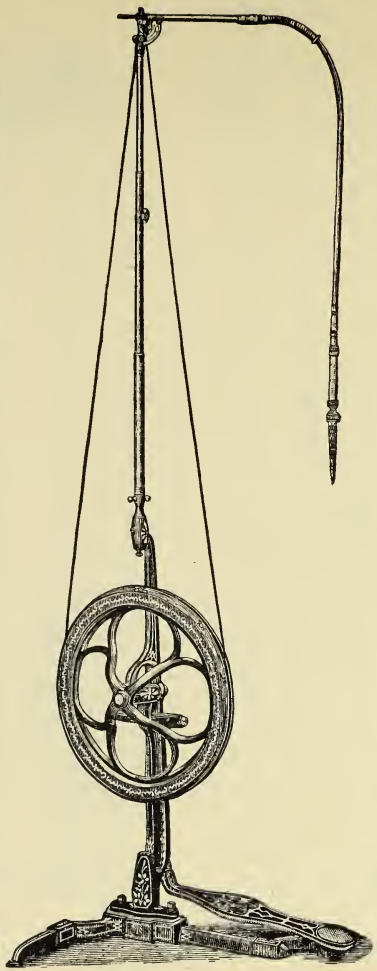
White's Improved Dental Engine.—Side Wheel.

E—Small Wheel.



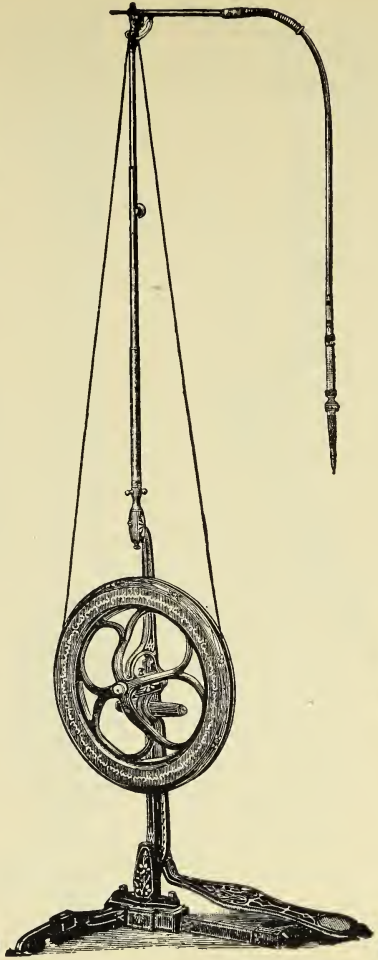
Diameter of Driving-Wheel.....10 inches.
Weight " about 6¾ lbs.

F—Medium Wheel, Light.



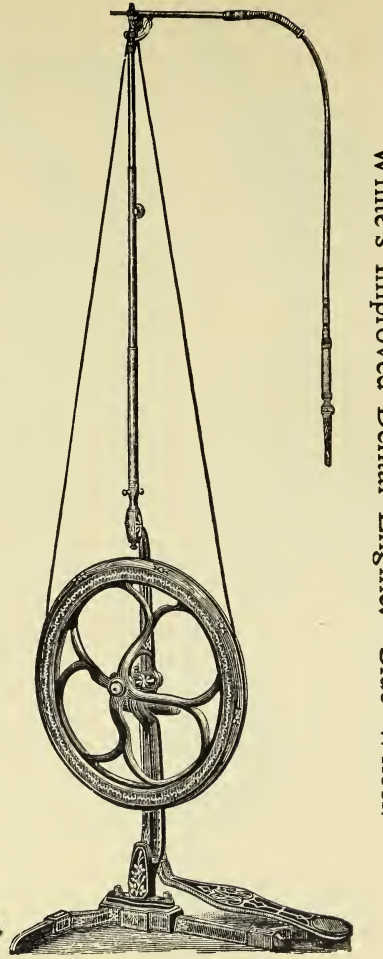
Diameter of Driving-Wheel.. 12⅜ inches.
Weight " " about 8¾ lbs.

G—Medium Wheel, Heavy.



Diameter of Driving-Wheel...12⅜ inches.
Weight " " about 15½ lbs.

H—Large Wheel.



Diameter of Driving-Wheel.....15 inches.
Weight " " about 14½ lbs.

Side-Wheel and Ball-Bearing Side-Wheel Engines.

The S. S. White D. M. Co.'s.

Sizes E, F, G, and H.
Rigged in various ways.

	Side-Wheel.	Ball-Bearing Side-Wheel.
With Flexible Arm-Support, Duplex-Spring Connection, and No. 6 or No. 7 Hand-Piece	$40.00	$50.00
The same with No. 8 Hand-Piece	36.00	46.00

Slip-Joint Connection No. 2 adds $7.50 to above prices.

	Side-Wheel.	Ball-Bearing Side-Wheel.
With Flexible Arm-Support, Cable Spring Attachment, and No. 6 or No. 7 Hand-Piece	$39.00	$49.00
The same, with No. 8 Hand-Piece	35.00	45.00
With simply the Sleeve and Cable, *without* Flexible Arm-Support or Duplex-Spring Connection, and with No. 6 or No. 7 Hand-Piece	37.00	47.00
The same, with No. 8 Hand-Piece	33.00	43.00
Boxing, either style, extra	.75	.75

When an Engine is ordered complete in any of the above styles, we give with it fourteen instrument and an oil can.

Engine Arms.

The S. S. White D. M. Co's.

When sold separately, are priced as follows:

Pulley-Head, Sleeve, Cable, Flexible Arm-Support, Duplex-Spring Connection, and No. 6 or 7 Hand-Piece	$25.00
The same, with No. 8 Hand-Piece	21.00

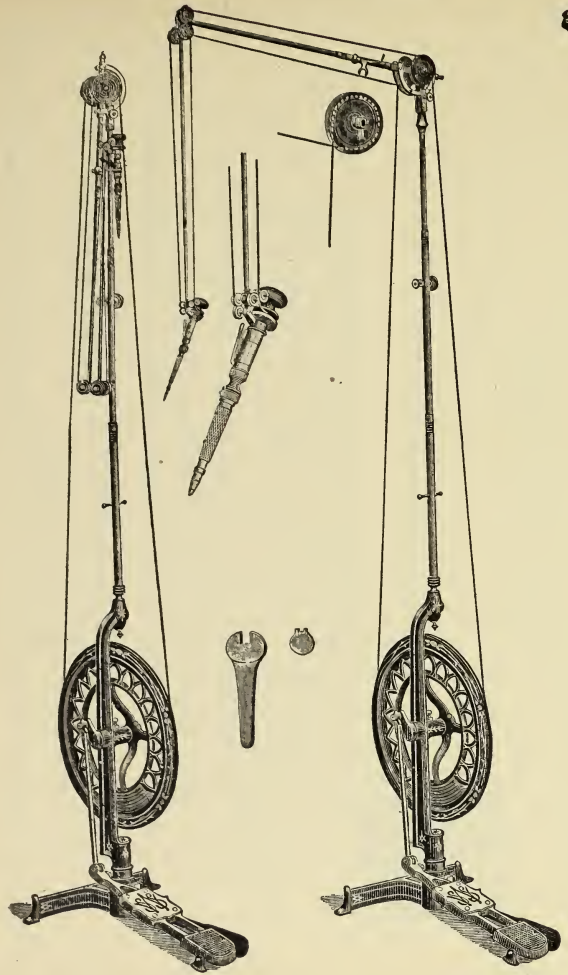
The No. 2 Slip-Joint adds $7.50 to the above prices.

Pulley-Head, Sleeve, Cable, Flexible Arm-Support, Cable Spring Attachment, and No. 6 or No. 7 Hand-Piece	$24.00
The same, with No. 8 Hand-Piece	20.00
Pulley-Head, Sleeve and Cable, with No. 6 or No. 7 Hand-Piece	22.00
The same, with No. 8 Hand-Piece	18.00

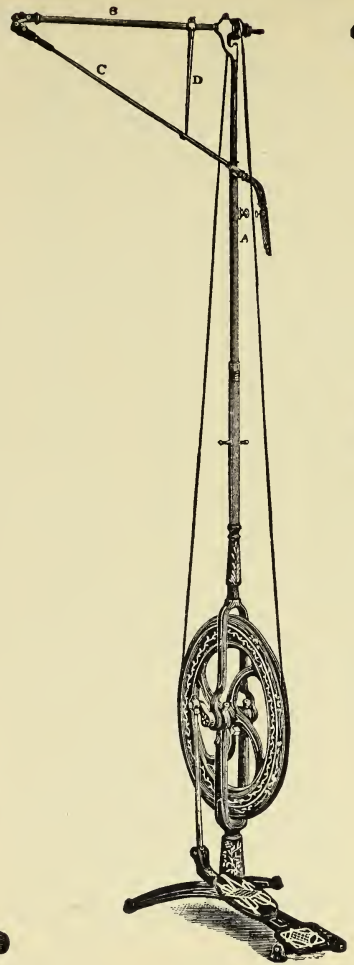
When the component parts of an Engine are sold separately, the prices will be as follows:

Base and Upright	$18.00
Pulley-Head	9.00
Cable, Complete	2.00
Sleeve	1.50
Flexible Arm-Support	1.00
Duplex-Spring and Slip-Joint Connection, complete	11.50
Slip-Joint, with Dog and Ferrule, separately	$7.50
Duplex-Spring Connection, complete, separately	4.00
Cable-Spring Attachment	2.25
Hand-Piece No. 6	10.00
Hand-Piece No. 7	10.00
Hand-Piece No. 8	6.00

The Weber-Perry Dental Engine.



The Improved Shaw Dental Engine.



The Doriot Engine.

FIG. 1.

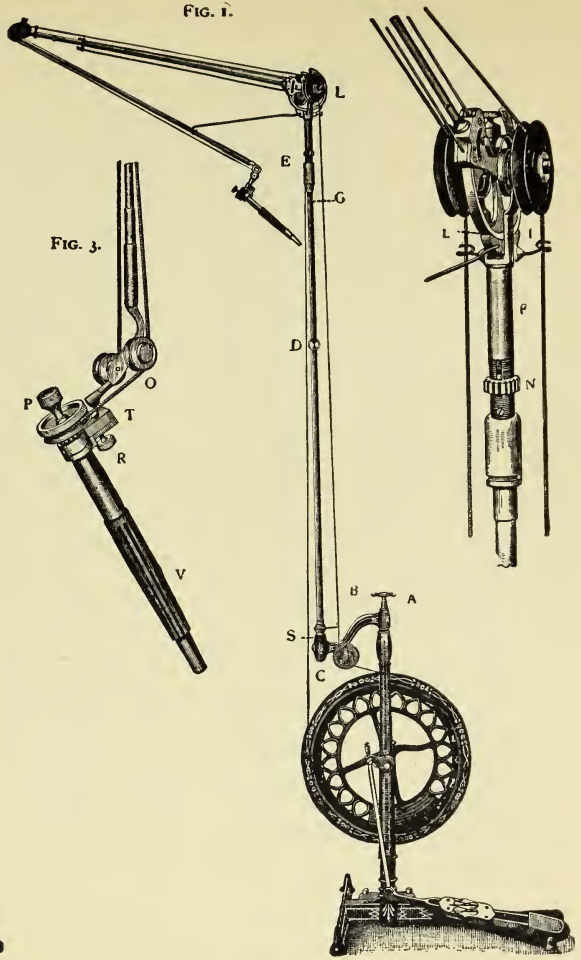


FIG. 3.

For prices or descriptions of these Engines, see page 122.

The Doriot Engine.

PRICES.

With Doriot Hand-Piece "A," as shown.....$60.00
With Doriot Hand-Piece "B" (see page 151)..... 61.00
With No. 6 Hand-Piece (see page 151)..... 68.00
Fourteen instruments and an oil can are furnished with each engine.

The Weber-Perry Dental Engine.

PRICES.

With No. 6 or 7 Hand-Piece.....$50.00
With No. 8 Hand-Piece 46.00
We can supply the Weber-Perry Engine Base and Standard, with S. S. White Flexible Arm, Flexible Arm-Support and Duplex Spring, No. 6 or 7 Hand-piece, and 14 Instruments, for 50.75

The Improved Shaw Dental Engine.

PRICES.

With No. 6 or 7 Hand-piece.....$40.00
With No. 8 Hand-piece 36.00
Slip-Joint Connection No. 2, extra..... 7.50
We can supply the Shaw Engine Base and Standard with the White's Flexible Arm complete, with Arm-Support and Duplex-Spring Connection, and No. 6 or 7 Hand-piece, for..... 45.75

Elliott Suspension Dental Engine.

PRICES OF PARTS.

Hand-piece No. 6 or 7, complete with No. 2 Slip-Joint Connection $25.00
Crane 5.00
Fusee 5.00
Sheave-Pulley 5.00
Boxing extra on each of above..... .75

New Style Pitman.

New Style Pitman, with Adapter to attach it to White's Engines, E, F, G and H.
Price of Pitman and Adapter $3.40
When the new style Pitman is to be attached to White's Engines, A, B, C, D, or Lathes Nos. 1, 2, 3 or 4, a new crank-screw will be necessary.
Price, Pitman, Adapter and Crank-Screw.....$3.65

Second Hand Engines.

WE always have a lot of second-hand engines standing around. Students buy a good many of them. We sell a good many to practicing dentists for heavy grinding or laboratory work.

We always fix up a second-hand engine before offering it for sale. We have never had one that was as good as new, but we never had one that wasn't just exactly as good as we said it was.

We will give full details about any we have. If it isn't as good as we say it is, we pay transportation both ways on it to get it back.

The price of a second-hand engine depends altogether upon the quality.

If we don't offer better quality for less money than anybody else, we have room to keep on storing the engine.

Electric Equipment.

WE are selling more and more electric engines every year. We make a specialty of them. We realized a long time ago that the time was coming when our electric equipment department would be one of the most important departments of our business. We started out to master the subject. We started out to get all the information worth having.

We didn't just go to the people who made the goods. We worked along with the dentists who used them. We set the engines up right here in our store and tested them.

The result is there isn't a firm in the dental business better posted about electric equipment than we are. We know the good from the bad.

In publishing this catalogue, we list only the things we know absolutely to be good. We can supply any electric outfit made. We recommend and guarantee only those we have listed. They are made by reliable people, who are going to stay in the business. We have confidence in them. We are going to stay in business if they don't. If any man buys one of the outfits we list, and it isn't what it ought to be, he will always know where to find us.

We have illustrated all of the more modern equipments we handle. We have separate booklets we are always glad to send if more detailed information is desired.

Electric lathes for the laboratory are listed in connection with other lathes in mechanical department.

Water Power.

All Dentists should use a Backus Water Motor for driving Dental Engine and Lathe, also for running ventilating fans. No noise—No trouble—Require no attention. Send for descriptive circulars and prices. Send to us for the Backus Co.'s booklet or direct, mentioning our name to Backus Water Motor Company, 172-182 Pennsylvania Avenue, Newark, N. J.

General Description of the Columbia Electric Dental Engine.

Made by The Ritter Dental Manufacturing Co.

Quality is the first consideration in the construction of the Columbia Electric Engines. None but the best tools and skilled mechanics are employed.

We have a factory devoted exclusively to the manufacture of our engines and lathes, and we are in the business to stay, which we can assure you is an important consideration when purchasing an Electric Dental Engine. In our method of suspending the motor, it hangs freely from a flexible conducting cord, passing over the two pulleys on a neat bracket. The motor is counterbalanced by a suitable weight, permitting it to be raised or lowered by the slightest touch.

In connection with the yoke in which the motor is free to turn on a horizontal axis, it permits an easy and almost universal movement. It entirely avoids that constant pull on the hands so common in the rigidly supported engines. It occupies no valuable floor space, and when you are through using it, simply drop the hand-piece, and the cable swings to a vertical position, as shown in the illustration.

The cable, sleeve, and hand-piece are thoroughly insulated from the frame-work of the motor, and this, together with the care taken in insulating the wire winding, makes it impossible to get a shock. Every motor is carefully tested as to this before it is sent out. The entire motor is enclosed in a handsome antique, silver-plated sphere, 4½ inches in diameter, making it extremely pleasing in appearance, and protecting it from all dust and dirt. By removing two small thumb-screws, one on each side, the sphere parts in the middle, giving free access to all portions. The efficiency is exceptionally high, which is of great importance where economy of current is required. There is absolutely no sparking at the commutator.

The speed of these motors may be varied at will from 1,000 revolutions per minute to 4,000, a range found in practice to be all ever needed. Throughout all this variation of speed the power remains practically the same, even at the very low speed.

Our quick-stopping device acts automatically each time the controller lever is returned to the central position, and instantly stops the bur. This is accomplished electrically, and requires no mechanical contrivances. The workmanship is, throughout, the very best. The bearings are made of the best phosphor bronze, fitted with unusual accuracy, and very long in proportion to their diameter. Hence the wear is exceedingly small. The commutators are of the best construction, and of the many engines in use, not one has ever proved defective.

Portable Controller used on both Direct and Alternating Current Engines.

Our Portable Controller has a single lever projecting through opposite portions of the case; with it the motor is started, stopped, and reversed, and the speed regulated from about 1,000 revolutions to 4,000 revolutions per minute. The controller can be placed in any position, but we think the most desirable place is just back of the chair. When in this position, by means of the double lever, an operator has control of his engine from either side of the chair without moving the controller. When the lever occupies a central position, no current is flowing, and the motor is at rest; a slight movement to the right runs the motor in one direction, and a movement to the left runs the motor in the reverse way, the speed being regulated by the distance the lever is moved from the center. Each return of the lever from either side, which is accomplished automatically upon removal of the operator's foot, instantly stops the bur.

The controller is the most abused portion of every electric outfit, and the one which invariably receives the least attention in the course of construction. We take just as much care in the construction of ours as we do with the engine. The contacts are on porcelain, and if attended to as we direct, they will last a lifetime.

We provide a method for lubricating the contacts which our wide experience has proven necessary, but entirely overlooked by other manufacturers.

In the manufacture of our electrical appliances we make every part of them just as good as we know how. We use only the best materials, and do not invite you to note simply this part, or that, but examine them in their entirety. Our claims for excellence do not rest on supreme merit in some individual feature. The details always receive our greatest attention. Every part is made by special tool, no filing and hammering into place. All insulation is of fire-proof mica, and porcelain spools for holding controller segments. No cheap red fibre, with plenty of putty and plaster-of-paris between the segments. Ask your electrical friend if our construction is right.

PRICES.

For 110-volt Direct Current, including Motor, Controller, Bracket, necessary Flexible Conducting Cord, and Flexible Steel Cable and Sleeve	$110.00
For 4-volt Battery Current, including Motor, Controller, Bracket, necessary Flexible Conducting Cord, and Flexible Steel Cable and Sleeve	105.00
Storage Battery, for 4-volt Motor	25.00
Special reducing resistance for operating 110-volt Engine on 220-volt circuit	6.00

The Columbia Direct Current Electric Dental Engine.

Made by The Ritter Dental Manufacturing Co.

Portable Controller, used on both direct and alternating current engines.

Complete method of suspension shown on page 69, or page 17 of our 1900 Catalogue.

Alternating Current Engine.

Made by The Ritter Dental Mfg. Co.

During the National Dental meeting, at Niagara Falls, in August, 1899, we first placed upon exhibition our Alternating Current Dental Engine. It was examined and tested by representatives of all the leading dental manufacturing firms, and also by prominent dentists. It proved a wonder, and our success elicited many kind words from all who saw it in operation.

Alternating Current Engine.—Continued.

This same motor has since been in daily use by a prominent dentist in the city of Rochester, and has always given perfect satisfaction. The outfit resembles our famous direct current engine, which is now so well and favorably known. It admits of excellent speed regulation, from about 1,000 revolutions to 3,600 revolutions per minute, and with ample power at the lowest speed. A single lever on the controller starts, changes the speed, instantly stops, and reverses it. It is noiseless in operation, and responds as readily to the movements of the controller lever as any direct current motor.

Everything which we have written in reference to our direct current motor applies equally well to this outfit. In spite of the published statements of our competitors, even at the present time, that an alternating current motor cannot be reversed or the speed regulated, we shall go on and supply our motor and guarantee its performance, just as we have stated it to you in the foregoing description. Remember this is not an idle dream "from some hopeful manufacturer," but a realization, the result of a liberal application of brains and common sense.

If you want one of these engines, send us your order; your good will and testimonial we will trust to the performance of this splendid little motor.

IMPORTANT NOTICE.

In ordering Alternating Current Engines, we must know the exact voltage and the number of alternations per minute of the current. This must be determined from the electric company furnishing the current.

In order to aid those unfamiliar with these terms, we will give a brief explanation. An alternating current of electricity is one whose direction of flow is rapidly reversed. Each such reversal is called an alternation; two alternations are termed a cycle. To determine how many alternations per minute a certain alternating current dynamo produces, multiply the number of poles or coils on the field magnet by the number of revolutions of the armature per minute. For instance, suppose the dynamo has ten poles and runs 1,600 revolutions per minute, then the number of alternations per minute would be 10x1,600, or 16,000.

Alternations are usually stated as so many per minute; cycles, as so many per second. As stated above, two alternations make a cycle; then $16{,}000 \div 2 = 8{,}000$ cycles per minute; and 8,000 divided by $60 = 133$ cycles per second; so either term can be used, 16,000 alternations per minute, or 133 cycles per second.

The voltage is determined by a volt-meter, as in the direct current. The usual number of alternations in commercial use are 6,000, 7,200, 14,400, 15,000, and 16,000.

When ordering always be sure and state type of motor wanted.

PRICE TYPE A. C. 60.

For Alternating Current (not exceeding approximately 110 volts and 7,200 alternations), including Motor, Controller, Bracket, Suspension Cord, and Steel Cable and Sleeve.....$125 00

Alternating Current Engine.

Made by The Ritter Dental Mfg. Co

Type A. C. S. S., for all alternations exceeding 7,200.

Owing to the increased weight of our Alternating Current Engines, *intended or the higher number of alternations*, we have adopted the plan of suspension, shown in above illustration.

The bracket should be fastened to the window casing, either to the right or left of chair, about five feet high. It can be swung around anywhere in front of the chair.

The movements of the bracket are most convenient, and meet all the exigencies of practice. The front end has a vertical range of about two feet, can be raised or lowered, and always remains in any position without locking. There is also a sliding extension rod.

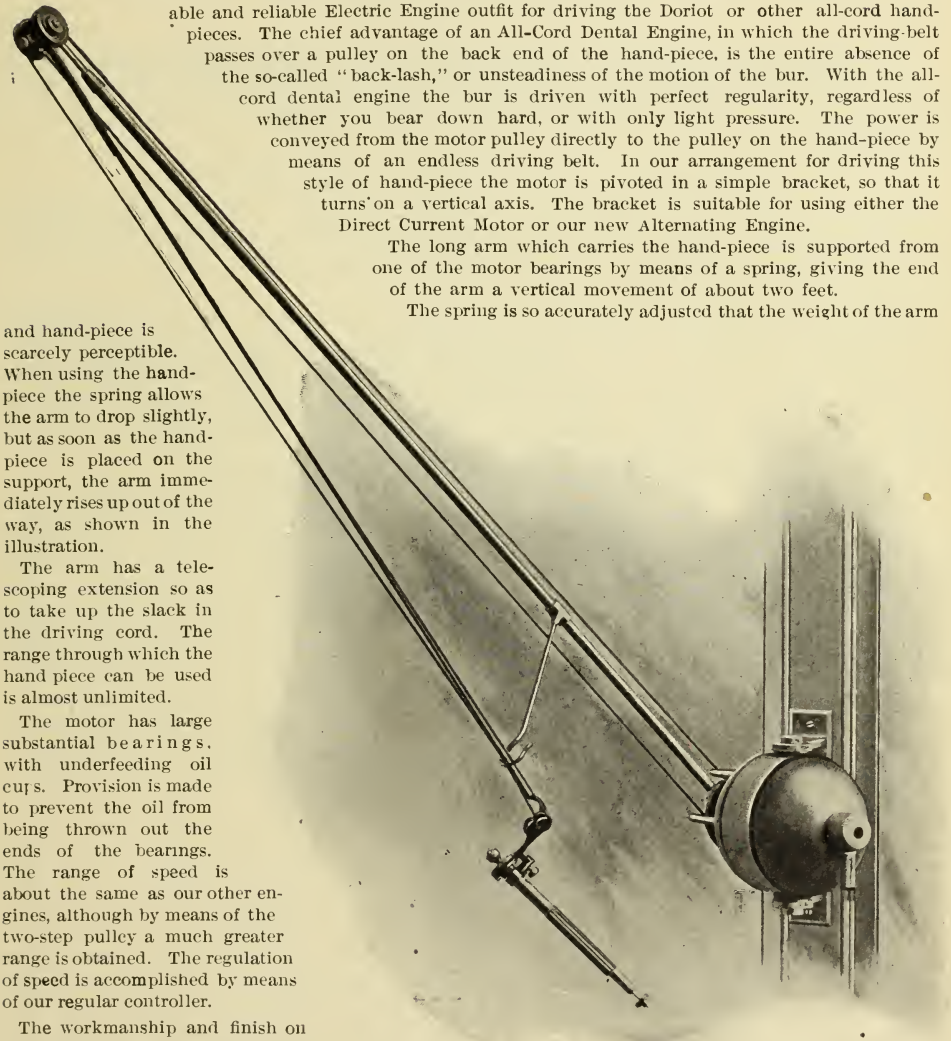
The motor and controller are the same as in our suspension style. The bracket is nicely japanned and nickel-plated.

Price: Type A. C. S. S., for alternating current (not exceeding approximately 7,200 alterations and 110 volts), including Motor, controller, Bracket, Flexible Cord, and Steel Cable and Sleeve.....$120 00

All-Cord Electric Dental Engine.

Made by The Ritter Dental Mfg. Co.

For Driving the Doriot or Other Cord Hand-Pieces.



This outfit we have designed to meet the demands for a simple and convenient, yet durable and reliable Electric Engine outfit for driving the Doriot or other all-cord hand-pieces. The chief advantage of an All-Cord Dental Engine, in which the driving-belt passes over a pulley on the back end of the hand-piece, is the entire absence of the so-called "back-lash," or unsteadiness of the motion of the bur. With the all-cord dental engine the bur is driven with perfect regularity, regardless of whether you bear down hard, or with only light pressure. The power is conveyed from the motor pulley directly to the pulley on the hand-piece by means of an endless driving belt. In our arrangement for driving this style of hand-piece the motor is pivoted in a simple bracket, so that it turns on a vertical axis. The bracket is suitable for using either the Direct Current Motor or our new Alternating Engine.

The long arm which carries the hand-piece is supported from one of the motor bearings by means of a spring, giving the end of the arm a vertical movement of about two feet.

The spring is so accurately adjusted that the weight of the arm and hand-piece is scarcely perceptible. When using the hand-piece the spring allows the arm to drop slightly, but as soon as the hand-piece is placed on the support, the arm immediately rises up out of the way, as shown in the illustration.

The arm has a telescoping extension so as to take up the slack in the driving cord. The range through which the hand piece can be used is almost unlimited.

The motor has large substantial bearings, with underfeeding oil cups. Provision is made to prevent the oil from being thrown out the ends of the bearings. The range of speed is about the same as our other engines, although by means of the two-step pulley a much greater range is obtained. The regulation of speed is accomplished by means of our regular controller.

The workmanship and finish on this outfit is the very best, and in operation the motor is practically noiseless. Those who prefer the All-Cord Engines will find this outfit the acme of perfection. We believe it reaches every desirable condition with the least display of machinery, is compact, and occupies no floor space.

PRICES.

Price, complete, for 110-volt direct current, with Foot Controller and necessary cord, without hand-piece, $115 00
Special reducing resistance for operating 110-volt engine on 220-volt circuit, ... 6 00
Price for alternating current not exceeding 110 volts, including same as above, ... 125 00

When ordered with Doriot hand-piece "A" add $14 00 to above prices.

IMPORTANT—When ordering the above outfit for the alternating current, be sure and state the voltage and the number of alternations. (Read "Important Notice" on page 127.)

NOTE.—All Cord Engines will not be ready for delivery until after July 1st 1901.

Description of Batteries

Required to Operate Four-Volt Engine and Six-Volt Lathe.

Made by The Ritter Dental Mfg. Co.

Our 4-volt Engine is intended for those dentists who are unable to obtain a regular day supply of electric current. It requires only two cells of storage batteries, and takes about three amperes of current, a very important point when charging the storage battery from bluestone cells.

HOW STORAGE BATTERIES ARE RECHARGED.

There are several methods applicable to the dentist's needs. In many of the small cities the electric companies supply 110 or 220-volt direct current, but at night only. Under these circumstances the battery can be charged during the night, and be available for running the motor during the day.

The current supplied to the large arc street lamps also answers admirably for charging. One all-night connection is usually sufficient for running the engine throughout a week. There is no need of resistance. The full current of 8 to 10 amperes can pass through the cells without injury. A proper switch must be provided for connecting and disconnecting the circuit. When either of these methods are in use for charging the storage cells, our 6-volt battery will run both the engine and laboratory lathe.

When charging from an arc-light current, we advise the use of our glass jar batteries.

When no electric lighting current is supplied, we provide seven improved bluestone batteries, which are always connected to the storage battery, and they supply a small amount of electricity to them continuously, regardless of how they are being used, and will supply energy enough to the storage battery to run our 4-volt engine, but will not supply enough to run the lathe. NEVER ATTEMPT TO RUN A LABORATORY LATHE FROM STORAGE BATTERIES WHEN THEY ARE BEING CHARGED FROM BLUESTONE CELLS, as the latter will not develop the required amount of energy. The storage battery cannot be charged from an alternating current, except by means of an expensive appliance.

If the storage battery is kept properly charged, and the solution maintained over the tops of the plates, which lowers principally from evaporation, they will prove very reliable.

The battery is not objectionable, and should be placed as close to the engine as possible.

PRICES.

Storage Battery for 4-volt Engine, either in glass jars or in hardwood case..... $25.00
Storage Battery for 6-volt lathe, either style..... 35.00

(The 6-volt battery will run both engine and lathe.)

Arc-light switch, for connecting battery to arc light current..... 5.00
Resistance for charging battery from 110-volt direct current..... 6.00
Resistance for charging battery from 220 direct current..... 8.00
Hydrometer for testing strength of storage battery solution..... 2.00

When ordering storage batteries, be sure and state what style of battery is wanted, and what method is to be used in charging.

Improved Bluestone battery, per cell..... $2.50
One charge Bluestone, per cell ..... .60
One Baume Hydrometer for testing strength of solution..... 2.00

Every purchaser ought to have a hydrometer, also be sure to send for a copy of our directions.

A storage battery must be fully charged before the bluestone cells are connected, then it will always maintain its charge.

BROWNING ELECTRIC APPARATUS.

Made by The Browning Mfg. Co., Milwaukee, Wis.

THE BROWNING SUSPENSION ENGINE

THE BROWNING STANDARD ENGINE

THE BROWNING SEPARATE SWITCH ENGINE

THE BROWNING CHAIR ENGINE

THE BROWNING LABORATORY LATHE

THE BROWNING RHEOSTAT

THE BROWNING RESISTANCE BLOCK

THE BROWNING MOUTH LAMP

THE BROWNING ROOT DRIER

THE BROWNING CAUTERY

For Particulars of Above See Index. Write for Question Sheet and Direction Book.

The Browning Electric Engine.

With Separate Controller.

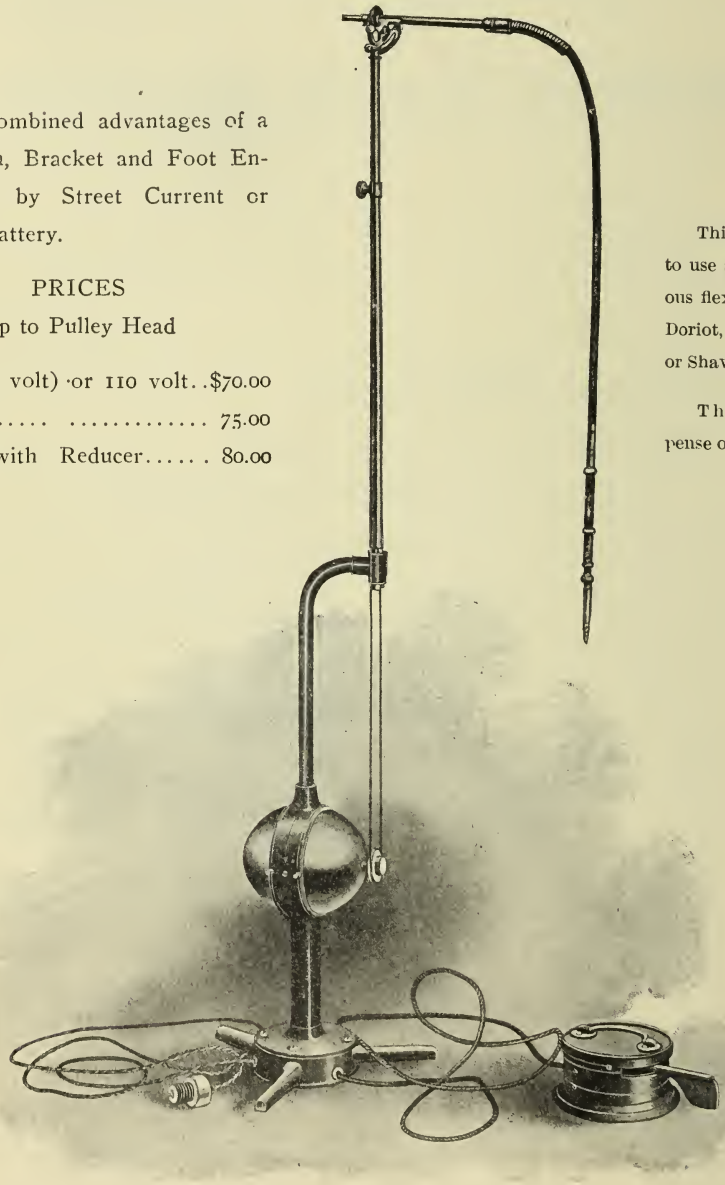
Made by The Browning Mfg. Co., Milwaukee, Wis.

The combined advantages of a Suspension, Bracket and Foot Engine, run by Street Current or Storage Battery.

PRICES

Up to Pulley Head

Battery (6 volt) or 110 volt..$70.00
220 volt..... ..... 75.00
500 volt with Reducer..... 80.00



This engine is fitted to use any of the various flexible arms, also Doriot, Weber-Perry or Shaw engine arms.

This avoids expense of new arms.

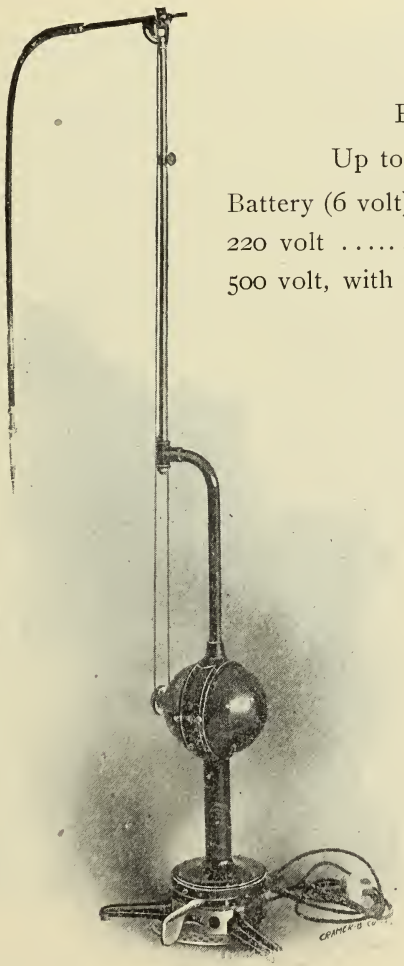
In this form, engine can be placed on left side of chair entirely out of the way, and can be controlled from right side of chair with the separate controller. The controller can also be made to back at each of the four speeds in either direction.

Write for Question Sheet and Direction Book.

The Browning Standard Electric Engine with Controlling Base.

Made by The Browning Mfg. Co., Milwaukee, Wis.

All Browning Engines have four speeds in each direction, stop instantly, are noiseless, and are made to lock on any speed in either direction.



PRICES.

Up to Pulley Head.

Battery (6 volt) or 110 volt....$60.00
220 volt 65.00
500 volt, with reducer..... 70.00

This Engine is fitted to use any of the various flexible arms, also Doriot, Webber-Perry, or Shaw engine arms.

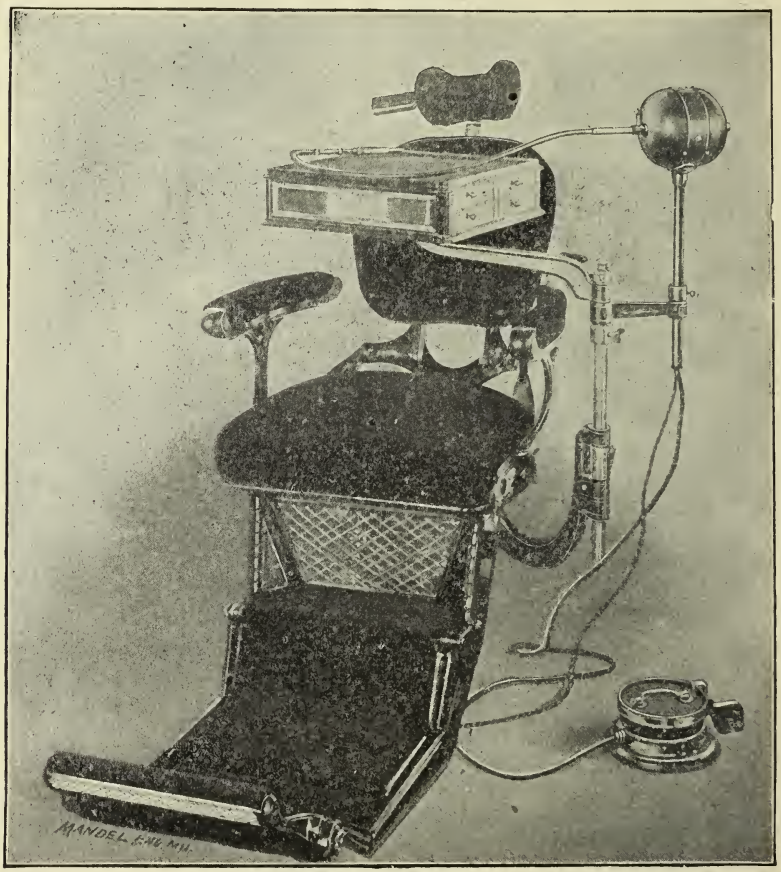
This avoids expense of new arm.

The Browning Engines and Lathe are operated with great success from Storage Batteries, which can be charged from all electric currents or from Charging Cells when no current is available.

The Browning Question Sheet and Direction Book explains in detail the above, and it will pay you to send for them.

The Browning Chair Engine.

Made by the Browning Mfg. Co., Milwaukee, Wis.



Can be attached to any chair, and has all the features of the other Browning Engines.

Complete with Controller and Attachments to Cable.

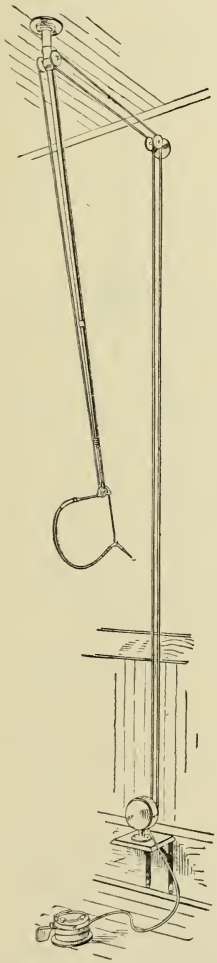
110 Volt or Battery	$60.00
220 Volt	65.00
500 Volt, including Reducer	70.00

Purchaser's Cable and Shaft attached without charge.

Write for Question Sheet and Direction Book.

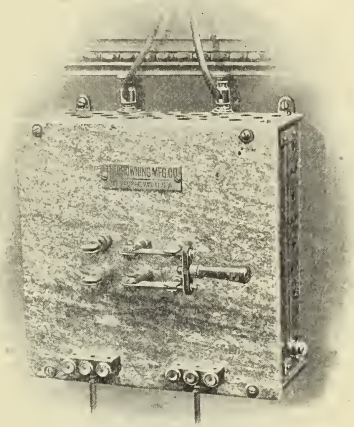
Electric Bracket Engines and Browning Rheostat.

Made by The Browning Mfg. Co., Milwaukee, Wis.



The Browning Rheostat.

Is specially made tc operate any or all of such instruments (of any make) as mouth lamp, root drier, cautery, hot air syringe, mallet, etc., on both direct and alternating current from 90 to 125 volts. It is thoroughly made and very attractive in appearance.



8½ inches square x 4 inches deep
Price..... ....$20.00

These outfits are both adapted for use where the dentist has very little floor space.

The speed is regulated as in the Browning Separate Controller Engine, with a separate foot switch, thus keeping the motor under perfect control.

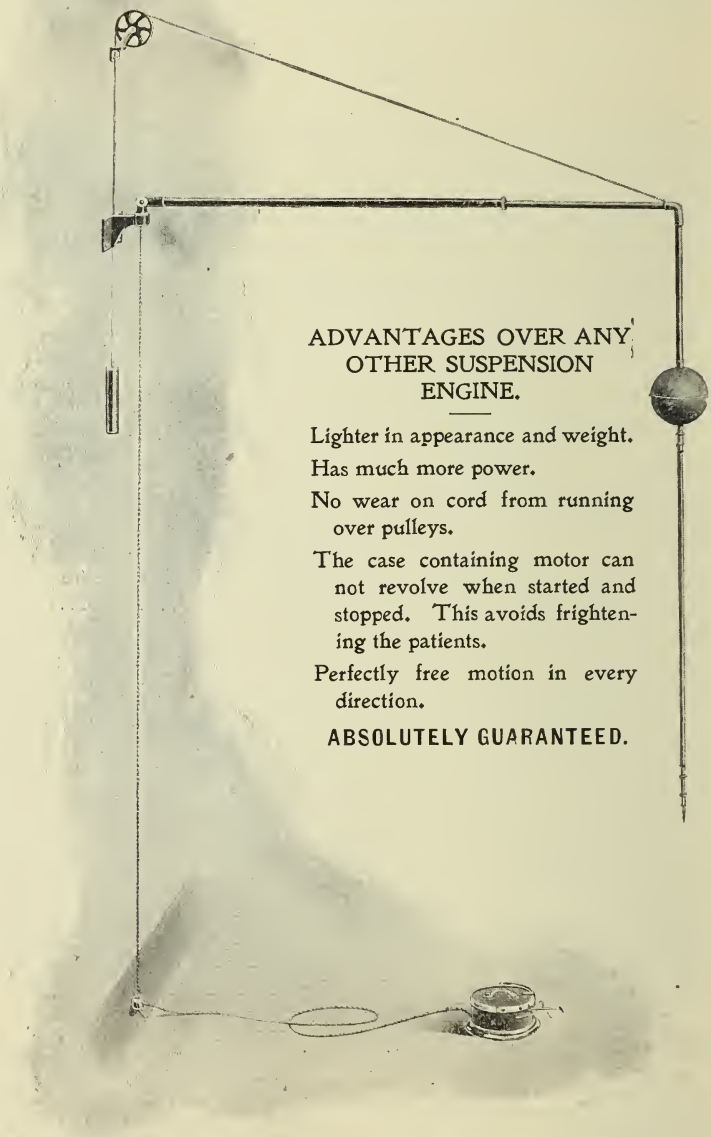
Price, not including flexible arm
110 volt or battery.$75.00
220 volt 80.00
500 volt, including Reducer 85.00
Bracket for holding motor 2.00

Price, not including flexible arm
110 volt or battery.$65.00
220 volt 70.00
500 volt, including Reducer 75.00
Bracket for holding motor 2.00

Write for Question Sheet and Direction Book.

Browning Suspension Engine.

Made by The Browning Mfg. Co., Milwaukee, Wis.



ADVANTAGES OVER ANY OTHER SUSPENSION ENGINE.

Lighter in appearance and weight.

Has much more power.

No wear on cord from running over pulleys.

The case containing motor can not revolve when started and stopped. This avoids frightening the patients.

Perfectly free motion in every direction.

ABSOLUTELY GUARANTEED.

The Browning Suspension Engine is noiseless, stops instantly, and can be locked at any one of four speeds in either direction.

PRICES

Complete down to Hand Piece.

110 Volt or Battery	$100.00
220 Volt	105.00
500 Volt, including Reducer	110.00

Write for Question Sheet and Direction Book.

S. S. White's New Model No. 2 Motor Stand Outfit.

The apparatus consists of the S. S. White Dental Motor No. 2, an iron stand with a mahogany top, on which it sits, a fire-proof speed-regulating resistance in an iron case supported by the stand, an electro-magnetic clutch on a countershaft supported on front of stand, and a governing treadle connected to it by a cable. The Motor is inclosed in a glass case to protect it from dust, and the stand is mounted upon rubber-rimmed wheels.

The Motor has an extra pair of brushes and collecting rings for use with the Transformer, for operating the New Electric Mallet, Hot-Air Syringe, etc. Further details and illustrations mailed upon application.

PRICES.

	With Wall-Switch E.	With Plain Trans-f'rm'r.
The S. S. White New Model No. 2 Motor Stand, Starting, Stopping, Reverse and Special Controlling Treadle Outfit alone	$ 95.50	$ 95.50
Wall-Switch E	4.50	
Plain Transformer		35.00
	100.00	130.50

Prices of Electrical Outfits with Dental Engine Combinations.

The S. S. White Standard, Pulley-Head, Flexible Arm with Duplex Spring, New Arm Support and Hand-Piece	29.00	29.00
No 2 Motor Stand Outfit	100.00	130.50
	129.00	159.50
The S. S. White Pulley-Head, Flexible Arm with Duplex Spring, and New Arm Support and Hand-Piece, attached to the Weber-Perry Upper Arm and Standard	44.25	44.25
No. 2 Motor Stand Outfit	100.00	130.50
	144.25	174.75
The New Doriot Engine Arm and Hand-Piece A, with Special Standard to fit No. 2 Motor Stand	48.00	48.00
No. 2 Motor Stand Outfit	100.00	130.50
	148.00	178.50
The Weber-Perry Cord Engine Arm and Standard, with S. S. W. Hand-Piece	43.50	43.50
No. 2 Motor Stand Outfit	100.00	130.50
	143.50	174.00
The Shaw Engine Arm, S. S. W. Hand-Piece and Standard	32.00	32.00
No. 2 Motor Stand Outfit	100.00	130.50
	132.00	162.50
The Improved S. S. White No. 2 Engine Wall Bracket, with Compensating Pulleys	40.00	40.00
Doriot Arm and Hand-Piece A	40.00	40.00
No. 2 Motor Stand Outfit	100.00	130.50
	180.00	210.50
The Improved S. S. White No. 2 Engine Wall Bracket, with Compensating Pulleys	40.00	40.00
S. S. White Pulley-Head Flexible Arm, with Duplex Spring, New Arm Support, and Hand-Piece	25.00	25.00
No. 2 Motor Stand Outfit	100.00	130.50
	165.00	195.50
The Elliott Suspension Engine for Ceiling, with Improved Hand-Piece	33.00	33.00
No. 2 Motor Stand Outfit	100.00	130.50
	133.00	163.50
Counterpoise Engine with No. 6 or 7 Hand-Piece	45.00	45.00
No. 2 Motor Stand Outfit	100.00	130.50
	145.00	175.50

Slip-Joint for use with S. S. White Flexible Arm in above Outfits, $7.50.

Mirror Front Transformer adds $2.00 to prices with plain Transformer.

Metal cover for Motor Stand, in place of glass shade, adds $2.75 to prices. Metal cover ordered separately, $4.50.

New Universal Pulleys, enabling Motor to be placed in any part of office.

Ceiling or Wall Pulley, complete ..... $ 3.40
Ceiling or Wall Pulley, with Universal Joint and Extension Rod 6.00
The S. S. White No. 2 Engine Wall Bracket, without compensating pulleys .. 35.00

The S. S. White New Treadle Rheostat Outfits.

In the Treadle-Rheostat outfits the treadle is combined with the rheostat. They are mounted in a fire-proof case. It has practically full power at slow speed.

The motor is either mounted on No. 3 Portable Motor Stand, to which any engine arms and standards may be attached, or furnished on a tripod which may be placed on a shelf, and used to drive a Suspension or Wall-Bracket engine.

PRICES.	With Motor A and Wall-Switch E.	With Motor A and Plain Transformer.*	With Motor B and Wall-Switch E.
Treadle-Rheostat	$ 37.50	$ 37.50	$ 37.50
Special 110-Volt Dental Motor A, with extra brushes, etc	32.00	32.00	
Special 110-Volt Dental Motor B, with out extra brushes, etc			27.00
Plain Transformer		35.00	
Wall-Switch E	4.50		4.50
No. 3 Motor Stand	6.00	6.00	6.00
Price complete	80.00	110.50	75.00
The S. S. White Standard, Pulley-Head, Flexible Arm with Duplex Spring, new Arm Support, and Hand-Piece	29.00	29.00	29.00
Treadle-Rheostat Outfit and No. 3 Motor Stand	80.00	110.50	75.00
	109.00	139.50	104.00
The S. S. White Pulley-Head, Flexible Arm with Duplex Spring, new Arm Support, and Hand-Piece Attached to Weber-Perry Engine Standard and Upper Arm	44.25	44.25	44.25
Treadle-Rheostat Outfit and No. 3 Stand	80.00	110.50	75.00
	124.25	154.75	119.25
The new Doriot Engine Arm and Hand-Piece A with special Standard to attach to No. 3 Stand	48.00	48.00	48.00
Treadle-Rheostat Outfit and No. 3 Stand	80.00	110.50	75.00
	128.00	158.50	123.00
The Weber-Perry Cord Engine and Standard	43.50	43.50	43.50
Treadle-Rheostat Outfit and No. 3 Stand	80.00	110.50	75.00
	123.50	154.00	118.50
The Shaw Engine-Arm, S. S. W. Hand-Piece and Standard	32.00	32.00	32.00
Treadle-Rheostat Outfit and No. 3 Stand	80.00	110.50	75.00
	112.00	142.50	107.00
The Improved S. S. White No. 2 Engine Wall Bracket, with Compensating Pulleys	40.00	40.00	40.00
Doriot Arm and Hand-Piece A	40.00	40.00	40.00
Treadle-Rheostat Outfit without No. 3 Stand but with Tripod	75.50	106.00	70.50
	155.50	186.00	150.50
The Improved S. S. White No. 2 Engine Wall Bracket, with Compensating Pulleys	40.00	40.00	40.00
S. S. White Pulley-Head, Flexible Arm, with Duplex Spring new Arm Support, and Hand-Piece	25.00	25.00	25.00
Treadle-Rheostat Outfit without No. 3 Stand but with Tripod	75.50	106.00	70.50
	140.50	171.00	135.50
The Elliott Suspension Engine for ceiling, with Improved Hand-Piece.	33.00	33.00	33.00
Treadle-Rheostat Outfit without No. 3 Stand but with Tripod	75.50	106.00	70.50
	108.50	139.00	103.50
S. S. White Arm with Duplex Spring, new Arm Support, and Hand-Piece for direct connection to Motor	19.25	19.25	19.25
Direct Coupler to connect Arm to Motor	5.00	5.00	5.00
Treadle-Rheostat Outfit without Stand but with Cone Socket	75.50	106.00	70.50
S. S. White Tool Bracket No. 1 to hold Motor	10.00	10.00	10.00
	109.75	140.25	104.75
Counterpoise Engine with No. 6 or 7 Hand-piece	45.00	45.00	45.00
Treadle-Rheostat Outfit without No. 3 Stand but with Tripod	75.50	106.00	70.50
	120.50	151.00	115.50

Crane for Elliott Suspension Engine, extra	5.00
No 2 Slip-Joint extra	7.50
Tripod for Motor when used without No. 3 Stand	1.50
Shelf with Iron Brackets for holding Motor	1.50
The S. S. White No. 2 Engine Wall Bracket without Compensating Pulleys	35.00

*Transformer with mirror front adds $2.00 to prices of Outfits with plain Transformer.

The S. S. White Flexible Arm, as supplied with these Outfits, includes the Duplex Spring and Flexible Arm Support.

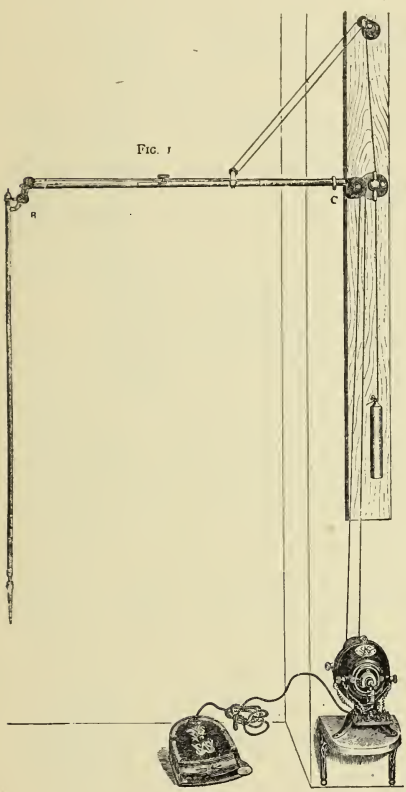


FIG. 1

The Counterpoise Dental Engine.

With Electric Motor and Rheostat.

Counterpoise Engine, with No. 6 or 7 Hand-piece, without Motor and Rheostat	$45.00
Motor A	32.00
Treadle Rheostat	37.50
Tripod for Motor	1.50
Bracket Shelf for Motor	1.50
	$117.50

The S. S. White Dental Engine Speed Regulator.

This is a device for regulating the speed, instantly stopping and reversing any form of motor, whether it is made for direct or alternating current, or is operated by water. All this is done mechanically. The device is a modification of the well-known friction disk.

The motor drives a disk in one direction only. A friction wheel moves across the face of this disk, conveying power by belt to the engine. This friction wheel is controlled by a foot lever connected by two cables. When the friction wheel is directly opposite the center of this disk, which is flattened there is no movement. It is obvious that the nearer the wheel is moved toward the edge of the disk the greater speed it acquires, the speed being limited only by the speed of the motor, which, of course, runs continuously. The change from one speed to another may be made almost imperceptibly, and the reverse is instantaneous.

Illustrations of this device, as well as details of construction, will be supplied on request.

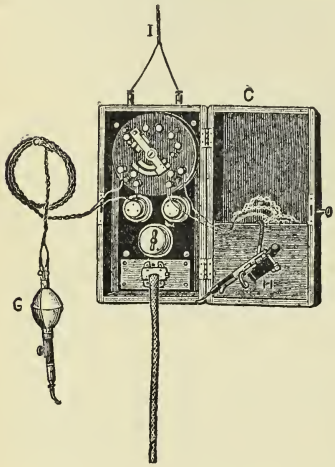
PRICES.

Mechanical Speed Regulator, including 15 yds. Cable, 6 Iron Pulleys, 2 yds. Engine Cord, 1 can Oil, and 1 Extra Rubber Friction Ring	$22.50
Counterpoise Engine, with No. 6 or No. 7 Hand-piece	45.00
1-12 H. P. Motor on Tripod for 110-volt Direct Current	28.50
1-6 H. P. Motor, for Alternating Current	40.00

Prices of Motors are subject to change.

When ordering Outfits or Motors for the alternating current, it will be necessary to state voltage and alternations in every case.

The S. S. White Transformer for Operating Accessories on No. 2 Motor Stand and Treadle—Rheostat Outfits.



The S. S. White Transformer furnishes (when connected to the No. 2 Motor Stand Outfit as now made, or to the new Treadle-Rheostat Outfit with Special Dental Motor A) a low-volt alternating current for operating the new alternating Electric Mallet, Mouth-Lamp, Hot-Air Syringe, and Cautery.

The special motors used with these outfits have an extra pair of brushes and collecting rings, and supply an alternating current which is sent through the Transformer, where by induction it generates a secondary current to operate the accessories. This secondary current has no connection with the street circuit, and on account of its low voltage is perfectly harmless in the mouth.

The case is made of mahogany.

If the outfit is to be used without the transformer, a plain wall switch is used to connect the motor to the circuit.

PRICES.

Transformer, with plain front and cable	$35.00
Transformer, with mirror front and cable	37.00
Wall switch E, with two fuse plugs and connecting cords	4.50

New Iron and Enamel Rheostats.

For 110 Volt Current.

For Kells' Systems Nos. 2, 3, 4 and 5.

Double Rheostat for engine, mallet and mouth lamp, with 50 c.p. lamp	$43.00
Single rheostat for engine	25.00
Single rheostat for mallet	28.00

The S. S. White 220 Volt Special Reducing Resistance.

The S. S. White 220-volt Special Reducing Resistance is an iron and enamel fire-proof rheostat, 12x12 inches, to permit the outfits described in the preceding pages to be operated from 220-volt direct currents. It gives them about the same currents and speeds they would have on the 110-volt circuit without it, and prevents the excessive sparkling at treadle contacts which would otherwise occur with 220 volts.

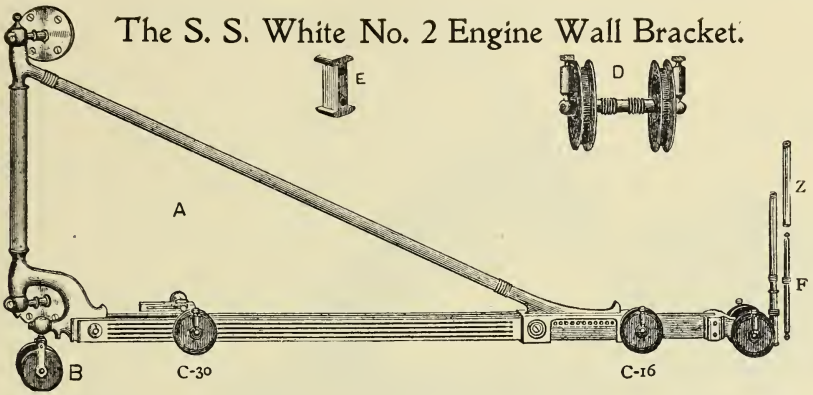
Price $18.00

Electric Incandescent Lamps.

PRICES.

A,	½-Candle	4-Volt for Laryngoscope	$1.00
B,	½-Candle	4-Volt, for Mouth-Lamp	1.00
C,	5-Candle	7-Volt, for Mouth-Illuminator	1.00
D,	32-Candle	110-Volt, for Mouth-Illuminator	1.00
D,	50-Candle	110-Volt, for Resistance for Electric Mallet	1.35

The S. S. White No. 2 Engine Wall Bracket.



This is handsome, strong, rigid, all metal, and nickel-plated. It is altogether the finest bracket yet produced. The brackets heretofore made, while giving good satisfaction with the S. S. White Engine-Head and Flexible Arm, have been found not to have sufficient rigidity to satisfactorily support other engine-arms, such as the Weber-Perry, Shaw, or the Doriot. The new bracket entirely overcomes this objection.

Length from the wall when closed is 36½ inches, including supports. The slide, which extends 19 inches, makes the extreme length 55½ inches. The complete bracket includes two belt compensating pulleys, C-16 and C-30, which automatically keep the belt tight at any position of the bracket.

Price, complete, with either Pulleys B or D.....$40.00
Without Pulleys C-16 and C-30, with Guide E and with either Pulleys B or D..... 35.00

Improved Electric Hot-Air Syringe No. 1a.

This is a thoroughly efficient, time-saving appliance. With the connections properly made, a touch upon the switch under the thumb, gives the operator, on compressing the rubber bulb, an instant and continuous blast of heated air. It may be regulated from slightly warm to the hottest blast.

Can be used on incandescent circuits in connection with the transformer (page 140), or with storage batteries, the Partz Motor Battery, No. 6, or the Edison-Lalande Battery.

Voltage, 3 to 4 volts; current, 4½ amperes.

PRICES.

No. 1 A, with Rubber Bulb and 7 feet connecting cord.....$15.00
Glass-lined metal tips for old style No. 1 Electric Hot Air Syringe..... 1.00

Improved Dento-Electric Cautery.

For Obtunding Sensitive Dentin.

No obtundent is absolutely universal. Electricity will succeed as often as any other, and the Dento-Electric Cautery offers a convenient means of applying it, particularly on the cutting-edges of worn-down teeth.

The Dento-Electric Cautery operates by means of a loop of platinum wire (No. 26, B. & S. gauge) which is held in contact with metal conductors which pass through a hard-rubber handle, the conducting wires being coupled to terminals at the end of the handle.

This Cautery can be used on incandescent circuit with our electrical outfits where the Transformer (see page 140) is used. It can also be used with one or two cells of a storage battery, or with four cells of the Partz Motor Battery No. 6 arranged two in series and two on multiple, or with six or eight cells of the Edison-Lalande Battery.

Voltage, 3 and 4 volts; Current, 10 amperes.

PRICES.

With 7 ft. Cord, with special connections.....$ 8.00
Without Cord 6.25
Handle separate 4.50
Special Cord for Cautery or Hot-Air Syringe..... 1.75
Point with Ivory Separator and Platinum Loop..... 1.75
Extra Platinum Loops .....each .10
Four Cells Partz Battery No. 6 for same..... 18.00

The Lee S. Smith & Son Cataphoric Outfit.

There are a good many more elaborate cataphoric outfits than this one. There may be some that are a good deal prettier, but there isn't one made that will do any better work.

This is a thoroughly practical instrument. It is built for service. It combines the good features of every instrument we know of. There are a lot of things about it that are not found in any other instrument.

The Battery. The battery of this outfit is subdivided. There are twenty cells in the box. There are four sockets in the top of the box. The red cord leading to the controller is the positive cord. It is inserted in Socket No. 1. Sockets Nos. 2, 3 and 4 are for the blue or negative cord. By changing position of negative cord the operator can work with five, ten or the whole twenty cells as he pleases. If five cells will do the business there's no use using twenty. If twenty are necessary they are there.

The Controller. The controller couldn't be improved. It is simple, but it is thoroughly efficient. It is meant to be operated by the patient. The patient knows how much current he can stand better than any machine ever made. If this controller is put right in his hands, and he is started off on five cells, it doesn't take him long to find out there's nothing to be afraid of. The chances are he will want to turn on more current than the operator thinks he can stand. When he feels the current he can turn it off and take a new start.

The Electrodes. Two electrodes are furnished with this outfit. A good deal of nonsense has been printed about electrodes. These are as simple as can be made. One of them is for the wrist. It is provided with a buckle. It can't get out of place. The other is simply a platinum point mounted in a hard rubber handle.

The Lee S. Smith & Son Cataphoric Outfit—Continued.

The Mouth Lamp. Current is turned into the lamp through the controller. The lamp is furnished with rubber handle, and is provided with aluminum hood. The life of the lamp will depend upon its use. It is as good a lamp as made.

Extras. There are no extras. This outfit is complete in itself. It includes Battery for Twenty Cells, Box for Battery, Controller, Needle Electrode, Wrist Electrode, Mouth Lamp, and all necessary Conducting Cords.

The price complete is **$25.00.**

Directions for use and more detailed description sent on request.

The S. S. White Dental Mfg. Co.'s Cataphoric Outfits.

OUTFIT NO 1. The S. S. W. D. M. Co.'s Current Controller, with 12 ft. Battery Cord and 18-Cell Dry Battery in oak box $25.00

1 Metal or Sponge Negative Electrode @ $1.00; 1 needle electrode No. 10, @ $1.85, and 1 pair cords, @$0.60.. 3.45

No. 1 outfit complete 28.00

Same with 24, instead of 18 cells... 31.50

OUTFIT NO. 2. The S. S. W. D. M. Co.'s Current Controller, with 4-way cable connected to Polished Cherry Wood Board, 12 ft. Battery Cord, 18-Cell Dry Battery in oak box.... 28.00

Electrodes, cords, etc., same as in No. 1..... 3.45

Weston's Milliamperemeter, especially designed for Cataphoric purposes, reading from 0 to 5 M. A., divided into 1-20ths. Diameter of case, 5½ inches; height, 2⅞ inches; weight, 5 lbs. 10 ozs..... 25.00

No. 2 Outfit complete..... 56.00

Same with 24, instead of 18 cells..... 59.50

Weston's Engine-room type Milliamperemeter, reading from 0 to 10 M. A., divided into 1-5ths, if desired in place of the special milliamperemeter. Diameter of case, 6¾ in.; height, 3¾ in.; weight, 9 lbs. 5 ozs. 16.50

The S. S. W. D. M. Co.'s Galvanoscope 7.00

The S. S. W. D. M. Co.'s Current Controller, with 12 ft. Battery Cord. 15.00

4-Way Cable, 8 ft. long, to connect Milliamperemeter to Controller 1.00

18 Cells Dry Battery, in varnished oak box with Binding Posts and Handles 10.00

24 Cells Dry Battery, in varnished oak box with Binding Posts and Handles 13.50

Dry Cells Separate, per cell..... .25

Bracket Arm to attach to S. S. W. No. 1 Tool Bracket 5.50

Bracket Arm to attach to S. S. W. Combination Chair Attachment 5.25

S. S. White Cataphoric Electrodes and Cords.

PRICES.

Set Obtunding and Bleaching appliances complete, with 1 Positive and 1 Negative Cord and 12 Rubber Nipples, in leather-covered case.....$20.00

Set Bleaching Electrode and accessories, with 1 Positive Cord and 12 Rubber Nipples, in pasteboard box. 6.00

SEPARATELY.

Syringe Electrode, with No. 3 Points, Cup, and Positive Cord..... 6.00

Duplex Electrode, with Positive Cord 5.00

Hand Electrode (No. 3), without Cord 1.00

Bleaching Electrode 2.00

Duplex Syringe 1.50

Nipple Expander 2.00

Positive Connecting Cord, 6 ft. long, with Spring Wire Clamp Tip..... .50

Negative Connecting Cord, 6 ft. long, with Tips ..... .30

Rubber Nipples, 2 sizes.....each .02

Plain Long Handle Tooth Electrode, with Bent Tip (No. 10)..... 1.85

Straight Platinum Tip to fit handle of No. 10..... 1.00

Curved Platinum Cup, to fit handle of No. 10 ..... 2.25

Plain Duplex Electrode (No. 13).... 3.00

Plain Duplex Electrode (No. 13a)... 3.00

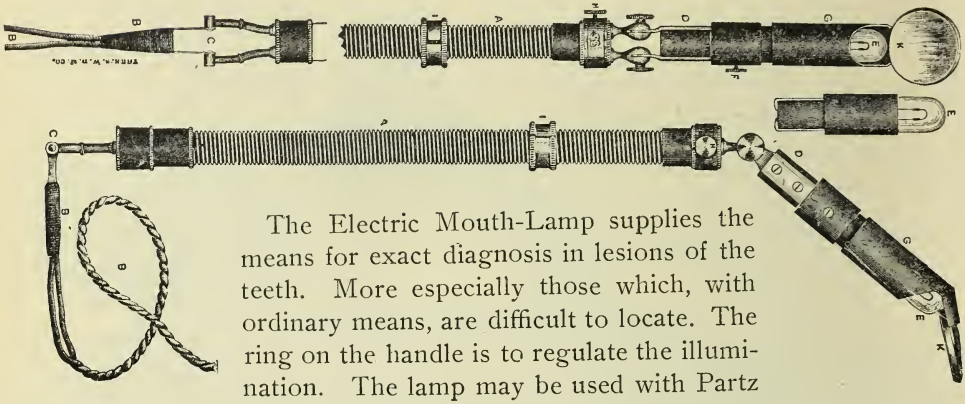
Single Cup Long Handle Electrode (No. 14)..... 1.50

Self-Holding Electrode (No. 15).... 2.15

Sponge Negative Electrode (No. 16). 1.00

Positive and Negative Cords to fit Electrodes Nos. 10 to 16....per pair .60

Electric Mouth Lamp and Laryngoscope.



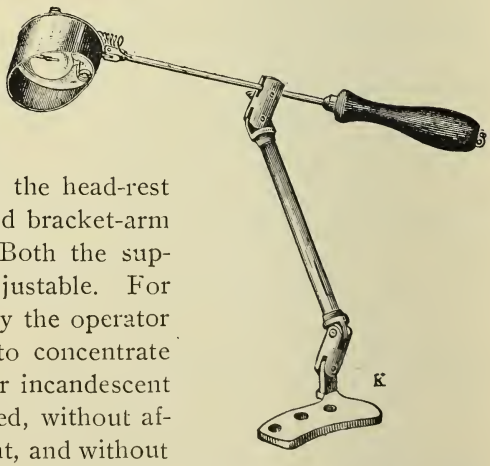
The Electric Mouth-Lamp supplies the means for exact diagnosis in lesions of the teeth. More especially those which, with ordinary means, are difficult to locate. The ring on the handle is to regulate the illumination. The lamp may be used with Partz battery or on 110-volt circuit with rheostat or transformer; also with storage batteries.

Voltage, 4 volts; current, 1 ampere.

Price, with Cord, in Morocco Case	$10.00
Price, extra Lamps in socket, each	2.00
Replacing Glass portion of Lamp, when broken	1.75
4 Cells Partz Acid Gravity Battery, No. 1	14.00
4 Cells Partz Gravity, No. 4	6.00

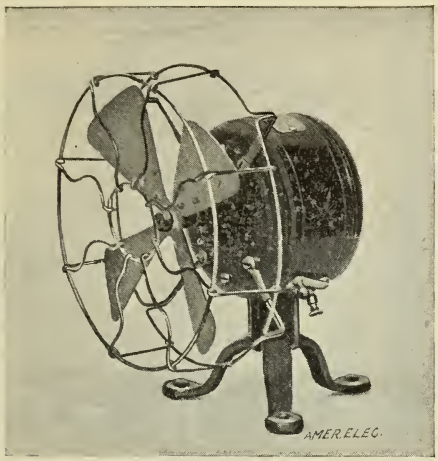
Electric Mouth-Illuminator

With Lamp Resistance for 110-Volt Circuit.



This appliance is to be attached to the head-rest frame of the chair by means of a hinged bracket-arm which gives it universal adjustment. Both the support and the hood over the lamp are adjustable. For directing a strong light in the oral cavity the operator has merely to adjust the Illuminator to concentrate the light of an Edison five-candle power incandescent lamp upon the part of the mouth desired, without affecting the eyes of the operator or patient, and without the slightest discomfort from heat. The lamp may be operated on street circuit or batteries. The bracket fits either Wilkerson or Watkins head-rest.

Price, Electric Mouth-Illuminator, including Bracket and 7 ft. Conducting Cord	$15.00
Resistance Lamp, mounted on Walnut Block, extra	4.00



The "Excello" Electric Fan Motor and Battery Outfits.

The "Excello" Fan Motor is built especially for use with the "Excello" Improved Gravity Battery in connection with storage batteries. This motor is of the iron clad variety and has one long self-oiling bearing, to which the armature shaft is nicely fitted, producing practically a noiseless running fan motor. The body of motor is nicely enameled in black, and striped in gold. All exposed parts are nickel plated, including the four blade, 8 inch fan and the fan guard.

The "Excello" Improved Gravity Battery for charging storage cells to run the "Excello" Fan Motor is described on page 146.

The storage battery is a satisfactory source of electrical energy if a reliable means for keeping it charged is at hand. When it is necessary to send the storage battery away to power station to be recharged, it becomes unreliable and a nuisance, as it is impossible to tell whether the battery is fully charged or empty, and one is liable at any time to be placed in an unpleasant position because storage battery is run out.

The use of the "Excello" Improved Gravity Battery does away with the trouble. By permanently connecting a suitable number of "Excello" batteries to the storage cells, we secure a constant and reliable source of electrical energy with which to keep them charged.

Possibilities.

Those who do not object to giving a little attention to the charging batteries, can by the use of a bulb attachment, which we can furnish, double the running time of the fan motor. This will require about two minutes each day, and once in two weeks, ¾ of the solution in porus cups will have to be drawn off and refilled with clean water. Blue stone and zinc are consumed about one-half quicker by this method.

Storage batteries should last from five to eight years if properly cared for. They are furnished in nicely finished cases which are fitted with handles for convenience in handling All our storage battery elements are formed and fully charged before shipping so that when received they should be ready for service. It is only necessary to set up the "Excello," charging batteries according to printed directions and connect to the storage cabinet at once. Both batteries will thus be kept in proper condition even if the storage battery is doing no work. Storage cabinet should be located as near the work as possible. The "Excello" charging batteries, however, can be placed wherever convenient. Use rubber covered wire, not smaller than No. 10 or 12, to connect fan motor to storage cabinet. Those who are already using storage batteries, whether with or without our "Excello" charging batteries, can use our fan motor with their batteries.

The Cost of Renewals

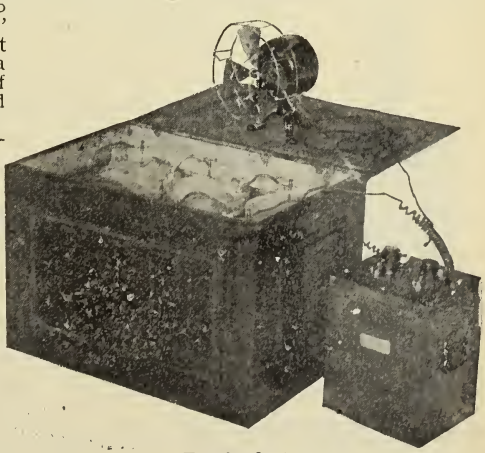
for the "Excello" battery outfit is about $6.00 for six months' service running fan three hours per day. The "Excello" battery renewals consist of blue stone (sulphate of copper) and an improved form of zinc element.

The cut (Fan outfit A) illustrates our regular 4-volt Fan Motor Outfit complete with six charging batteries in lead lined, polished oak box. This outfit will operate the fan motor THREE HOURS per day ON AN AVERAGE for six months. Six more "Excello" batteries will run the fan motor six hours per day Cost of renewals under normal conditions about $6.00 for six months. Renewals for double set of "Excello" batteries, $10.00 for same time. This outfit is just suited to the needs of the dentists office. It gives a steady and widely diffused breeze, and it will prove of inestimable value and comfort to both patient and practitioner.

Fan outfit B consists of one cell of storage battery in cabinet, three "Excello" batteries and Fan Motor. Speed of Fan about 700 revolutions. Three hours service per day for six months without care or attention. Cost of renewals $6 per year. This fan outfit is desirable where only a VERY gentle breeze is wanted.

PRICE LIST:

"Excello" Fan Motor with 6 feet silk conducting cord & terminals	$13.50
Outfit A, complete without battery box	45.00
Outfit B, complete, without battery box	30.00
4 volt Storage Battery in cabinet form & charg'd	15.00
2 volt Storage Battery in cabinet form & charg'd	10.00
"Excello" Battery complete without chemicals, per cell,	2.50
"Excello" battery zincs	.60
" Blue stone pr lb.	.10
8 cell lead lined, oak battery box,	12.00
6 cell lead lined, oak battery box,	9.00
3 cell lead lined, oak battery box,	7.50



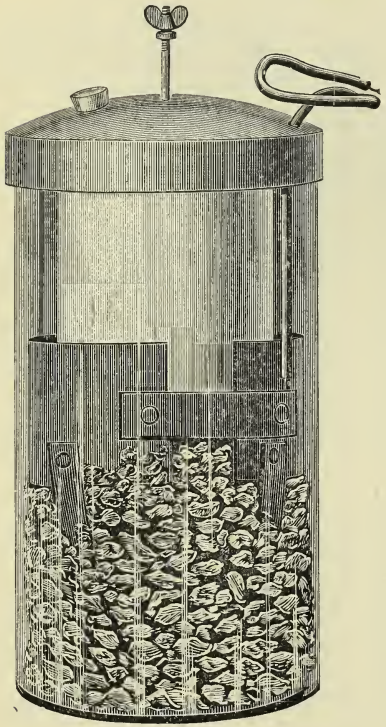
Fan Outfit A.

Storage Battery work is our specialty. We shall be pleased to give estimates on anything in this line.

CLARK & MILLS, Manufacturers of and dealers in Electro Dental Apparatus, 543 Boylston Street, Boston, Mass.

The "Excello" Improved Gravity Battery and Storage Battery Outfits,

For Operating Electric Engines and Lathe Motors.



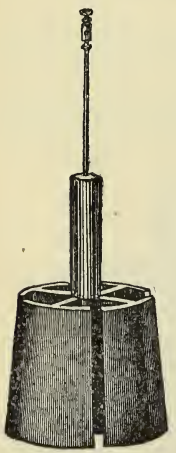
There are many practitioners so located that they are unable to use the commercial lighting current with which to operate their apparatus. The alternating current is not satisfactory for running electric engines, and in many places even where the 110 volts direct current is in use, it is not available during the day time. High tension currents above 220 volts are dangerous. We are, therefore, obliged to fall back upon batteries for our source of power.

The "Excello" Improved Gravity Battery,

Which is of an improved gravity type in combination with the original Daniell cell is the result of years of study and practical experience. Its superiority consists in its extremely low internal resistance, and consequent large current output, length of life, constancy, economy of material and labor, reliability and cleanliness. The "Excello" keeps clean at all times, if properly set up, and requires very little attention.

The "Excello" zinc is composed of mercury and the best speltzer obtainable.

Maintenance.



The "Excello" requires eight pounds of sulphate of copper (blue stone). This quantity, provided it is best quality, should last six months or more on ordinary work. A new zinc is required in from four to twelve months, depending on the kind of work. These two elements of renewal and plain water are all that are necessary for the successful operation of the "Excello."

The "Excello" is capable, under ordinary conditions, of maintaining a constant discharge rate of about 250 milliamperes, or about six ampere hours per day. By using two sets of primary batteries working in multiple series, twice the amount of current can be secured, and therefore double the working capacity of a single set.

Expense of Operating.

The cost of operating the "Excello" Improved Gravity Battery is about one-fourth of a cent per day per cell, and the cost of renewals about $1.25 per cell per year.

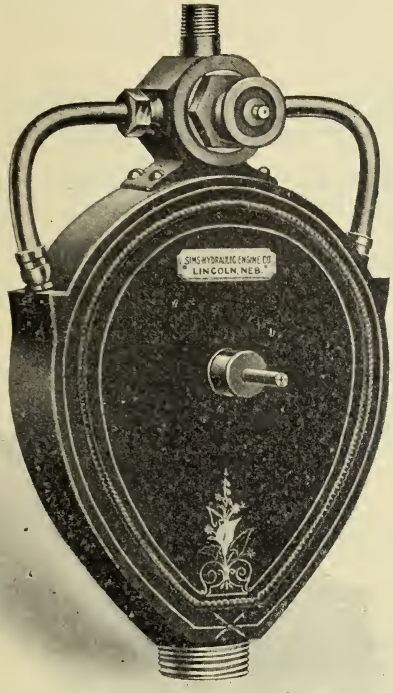
PRICE LIST.

Glass jar, 6x12	$ .45	Copper	.35
Porous cup	.60	Rubber cover	.50
"Excello" composite zinc	.60	Total	$2.50

Best grade Sulphate of Copper (blue stone), eight pounds per cell, at ten cents per pound.

CLARK & MILLS, Manufacturers of the "Excello" Improved Gravity Battery and Dealers in Electro-Dental Apparatus.

Special Apparatus Made to Order. 543 Boylston St., Boston, Mass.

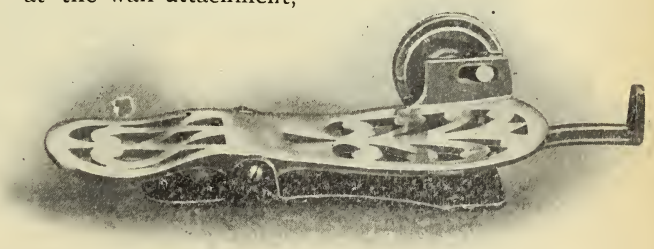


Motor.

Water Motor Dental Engine.

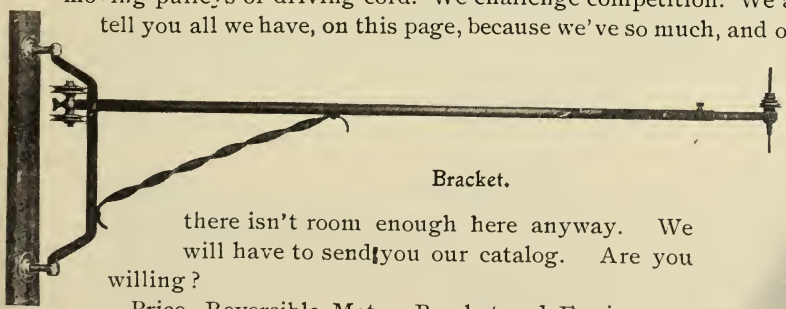
Made by The Sims Hydraulic Engine Co., Lincoln, Neb.

A Motor Dental Engine is only good when it runs right, and you do not want a complicated lot of devices and chemicals to fuss over, do you? You're too busy to spend two thirds of your time this way. We think the simpler a motor and your power is, the more efficient it is for your work. We MAKE the simple kind, it's the Sims Hydraulic Engine, and its always ready because we have nothing to get out of order. Its noisless, too. We couldn't afford to make any other kind, for dentists don't want that KIND. Our motor has long phosphor bronze bearings. It is durable. Our controlling valve attached to the motor and operated with the switch, which is placed at the base of the chair, controls the motor in starting, stopping, reversing and varying the speed. Not three or four speeds of 1,000 at a jump, but any rate of speed you desire. Bracket finished in nickel or oxidized copper, adjustable in length, pivoted at the wall attachment, and the cone bearing engine head is free to turn through a complete circle, gives perfect freedom to handpiece cable and sheath.



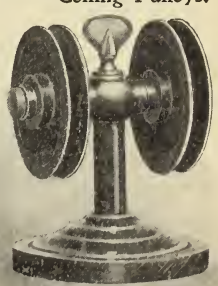
Foot switch.

Our self-lubricating ceiling pulleys have a grease cup that that can be refilled without removing pulleys or driving cord. We challenge competition. We are not going to try to tell you all we have, on this page, because we've so much, and offer it for so little, and there isn't room enough here anyway. We will have to send you our catalog. Are you willing?



Bracket.

Ceiling Pulleys.



Price, Reversible Motor, Bracket and Engine Head, Switch, Driving Cord and Wire Cable, (to connect switch with controller valve), $50.

Improved Cables and Sleeves for White's Engines.

Fig. 1.

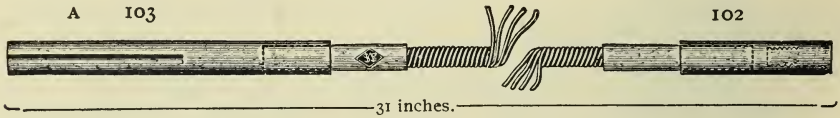


Fig. 2

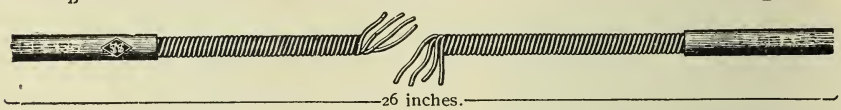


Fig. 3

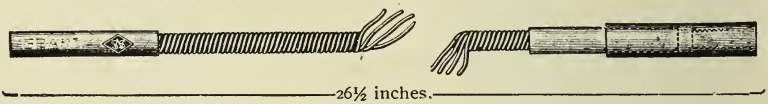


Fig 4.

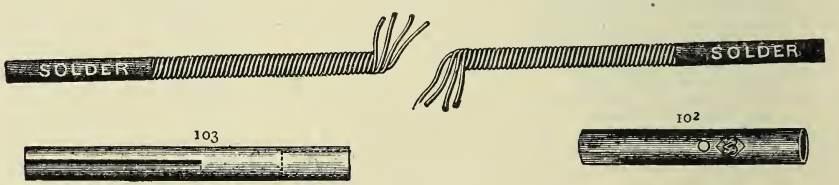
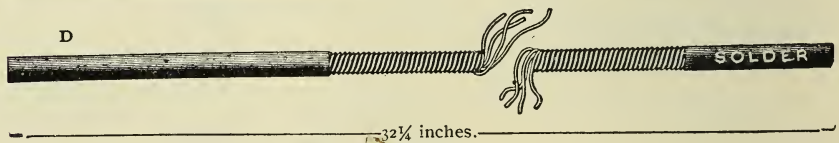


Fig. 5.



PRICES.

Cables "A," complete, with brass ferrules, Cable End No. 103 and Coupling No. 102	$2.00
Cables "B," with brass ferrules only	1.50
Cables B¹, with brass ferrules and Coupling No. 102	1.70
Cables "C," soldered ends	1.50
Cables "D," for old style Pulley-Head	1.50
Sleeves "A," or "B," with metal ends	1.50

Duplex Springs.

For the Shaw Engine-Arm or Slip Joint Attachment.

We have springs we sell at one-fourth the price of the Duplex, but we don't sell one-fourth as many of them. It is a question of quality that makes the difference in both respects.

Price, each ..... 40 cents.

Engine Belting.

PRICES.

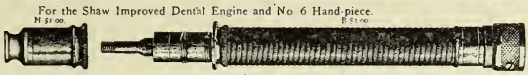
No. 1 (Brown) Belts, for White's Engines A, B, C. D, Shaw, and Johnston Engines	each $0.10
No. 2 (Maroon) Belts, for White's Side-Wheel Engines E. F, G. H (Endless)	each .15
No. 2 (Maroon) Belts, for Doriot Engines (Endless)	each .25
No. 3 (Small Maroon) Belts, for Weber-Perry Engines (Endless)	each .25
White Belts, for Bonwill Dental Engines (Endless)	each .15
White Belts for Elliott Suspension Engines	each .15
Special Endless Belts of Nos. 2 and 3 Belting	per yard .04
Splicing, extra	each .10
No. 1 Engine Belting (Brown)	per yard .01
Nos. 2 and 3 Engine Belting (Maroon)	per yard .04

PARTS OF THE DUPLEX-SPRING CONNECTION.

For the S. S. White Dental Engines and No. 6 Hand-piece.

For the S. S. White Dental Engines and Nos 7 and 8 Hand-pieces.

For the Shaw Improved Dental Engine and No 6 Hand-piece.



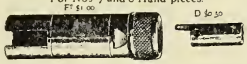
For the Shaw Improved Dental Engine and Nos 7 and 8 Hand-pieces.

Price, complete, any of the above combinations.....$4 00

Extra Hand-pieces may be fitted for the No 2 Slip-Joint System, as illustrated below.

For No. 6 Hand-piece.

For Nos 7 and 8 Hand-pieces.



Price, either combination as illustrated.....$1 50

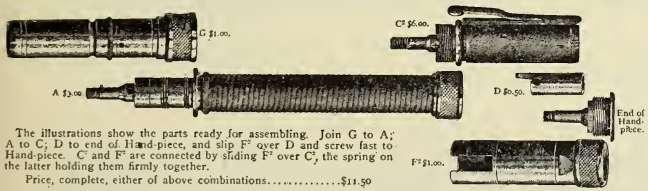
PARTS OF THE DUPLEX-SPRING AND No. 2 SLIP-JOINT CONNECTION,

For the S. S. WHITE DENTAL ENGINES A, B, C, D, E, F, G, H.

FOR HAND-PIECE No. 6.

The illustrations show the parts ready for assembling. Join G to A; A to C²; D to end of Hand-piece, and slip E² over D and screw fast to Hand-piece. C² and E² are connected by sliding E² over C², the spring on the latter holding them firmly together.

FOR HAND-PIECES Nos. 7 and 8.



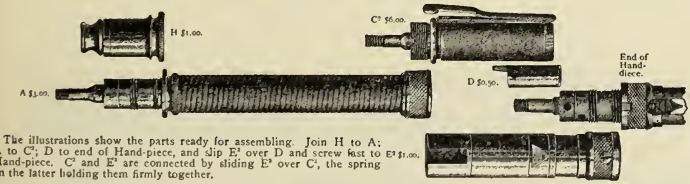
The illustrations show the parts ready for assembling. Join G to A; A to C; D to end of Hand-piece, and slip F² over D and screw fast to Hand-piece. C² and F² are connected by sliding F² over C², the spring on the latter holding them firmly together.

Price, complete, either of above combinations.....$11.50

PARTS OF THE DUPLEX-SPRING AND No. 2 SLIP-JOINT CONNECTION,

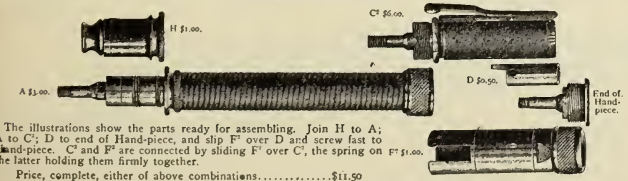
FOR THE IMPROVED SHAW DENTAL ENGINE.

FOR HAND-PIECE No. 6.



The illustrations show the parts ready for assembling. Join H to A; A to C²; D to end of Hand-piece, and slip E² over D and screw fast to Hand-piece. C² and E² are connected by sliding E² over C², the spring on the latter holding them firmly together.

FOR HAND-PIECES Nos. 7 and 8.



The illustrations show the parts ready for assembling. Join H to A; A to C²; D to end of Hand-piece, and slip F² over D and screw fast to Hand-piece. C² and F² are connected by sliding F² over C², the spring on the latter holding them firmly together.

Price, complete, either of above combinations.....$11.50

Flexible Engine-Arm Support.

The flexible part of this Support is a tapered flat spiral spring, which yields readily to the weight of the arm, but maintains an easy curve and prevents permanent bends in the cable.

Price $1.00

Parr's Engine-Arm Support.

The clamping-band at the end of the arm is fixed, while the other, being movable, may be placed where it will afford the best results. Nickel-plated all over. Price .....75 cents

Adjustable Arm-Support for the Shaw Engine.

The Support is 7¼ inches long over all, nick el-plated. The clamping-screw is blued steel. It can be applied to any Shaw Engine.

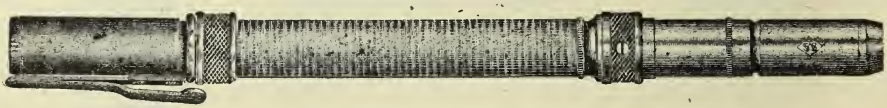
Price $1.00

Whites Engine-Arm Support Spring $1.00

No. 2 Slip-Joint and Duplex Spring Connections.

FOR SHAW ENGINE.

FOR S. S. WHITE ENGINE.

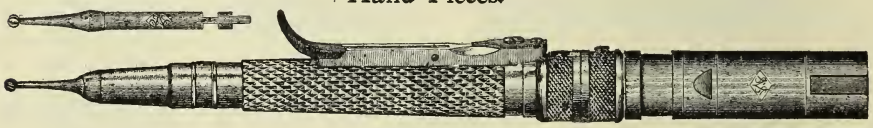


The complete combination of No. 2 Slip-Joint and Duplex-Spring Connection, with Hand-pieces properly fitted, are shown upon this page.

A screw-socket on the end of the cable or engine-arm is necessary for the application of the Slip-Joint and Duplex-Spring Connection. All S. S. White and Shaw engine-arms adapted for the Nos. 6, 7, and 8 Hand-pieces have this socket.

Hand-piece No. 6 or No. 7, with Slip-Joint and Duplex-Spring Connection for the White or Shaw Engines.....each	$21.50
Hand-piece No. 8, with Slip-Joint and Duplex-Spring Connection, for the White or Shaw Engines.....each	17.50
Hand-piece No. 6 or No. 7, with Duplex-Spring Connection, for the White or Shaw Engines.....each	14.00
Hand-piece No. 8, with Duplex-Spring Connection, for the White or Shaw Engines.....each	10.00
Slip-Joint, separately.....each	7.50
Duplex-Spring Connection, separately.....each	4.00
Slip-Joint atatchment No. 2, for Doriot Engine.....	12.00
Slip-Joint attachment No. 2 with adapter for Weber-Perry Engine.....	12.50

Hand Pieces.

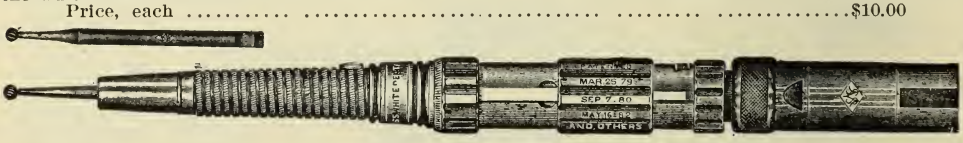


Number Six.—All other hand-pieces are tools—this is an instrument. It is exact and precise in operation. The bit may be secured or released with one hand. It has an absolutely secure and true bur-fastening. When locked the bur and spindle become one straight and solid piece.

Price, each.....$10.00

Number Seven.—Probably the most popular Hand-Piece on the market. It is universal. Will hold plain wire as well as slotted bur shank. Is easily repaired. The lost motion may readily be taken up. Operated by sliding end of hand piece to or from the operator. This releases or secures the bur.

Price, each.....$10.00



Number Eight.—In the construction of this Hand-Piece, the manufacturers have succeeded in constructing a spring clutch device for locking the spindle, thus rendering it unnecessary to hold it in the fingers when a bit is inserted or removed. No wrench or screw-driver is required in taking apart for cleaning or oiling.

Price.....$6.00

Notice.

All of these Hand-Pieces as regularly sold are furnished with part similar to "G. G.," (pag 149. for attachment to sheath of regular engine. The illustrations show the Hand-Pieces as rigged for the Slip-Joint connection. Cuts are ¾ size.

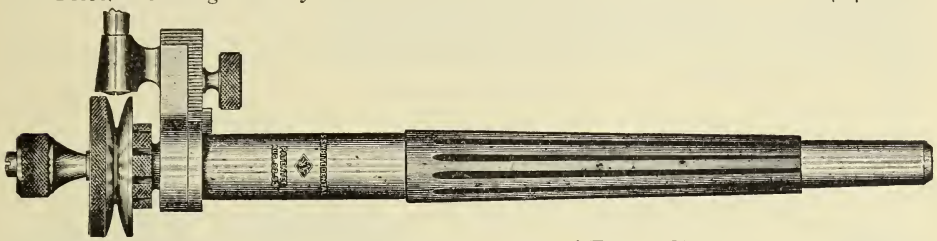
Special Notice.

Instructions for attaching these Hand-pieces to engines and for oiling, cleaning, etc., will gladly be mailed upon application.

Doriot Hand-Piece A.

Two pieces, one inside, one outside. That's the story of the Doriot Hand-Piece A. The bur is secured or released by turning the milled nut shown. This opens and closes the end of shaft in which bur is inserted.

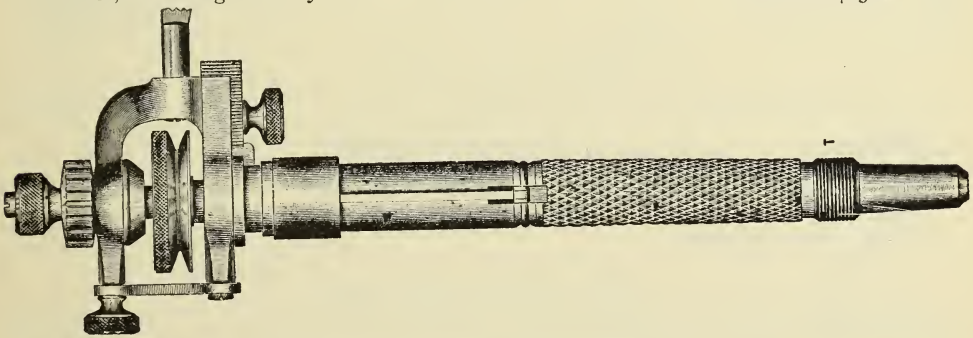
Price, including Wrist-Joint..... .....$14.00



Doriot Stop-Motion Hand-Piece B.

Similar in operation to Hand-Piece A, with the exception that by sliding forward the ring shown—this is easily accomplished by the hand holding the instrument—the bur is instantly stopped.

Price, including Wrist-Joint..... .....$15.00



Right Angle No. 2 for Doriot Hand-Piece A.

To attach the Right-Angle to the Hand-Piece, remove the case (see directions with the Engine), and put the Angle Attachment in the place of it.

We are prepared to furnish for the Doriot Hand-Piece A, Obtuse and Acute Angles as well as Right Angles Nos. 2 and 3. The No. 2 is shown in engraving.

Price of either..... .....$8.00

Right Angle Hand-Piece.

Fitted for the No. 2. Slip-Joint Connection.

No. 2 Right Angle.

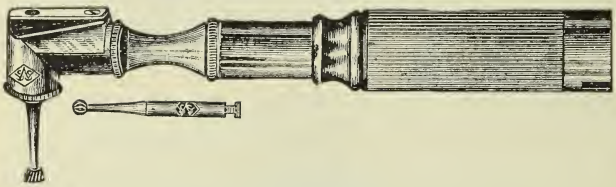
We are also prepared to furnish Right Angle Hand-Piece No. 3 as well as the No. 2 in both obtuse and Acute Angles.

Price of either..... .....$8.00

Angle Attachments.

There has been a good deal of nonsense printed about Angle Attachments. A good many things have been said about them that were not true, and that the men who have believed them are finding out were not true.

No. 2. Right Angle for Hand-pieces Nos. 6, 7, and 8.



It may be possible some day for some one to produce a good changeable angle hand-piece. It hasn't been done yet. We don't believe it ever will be done.

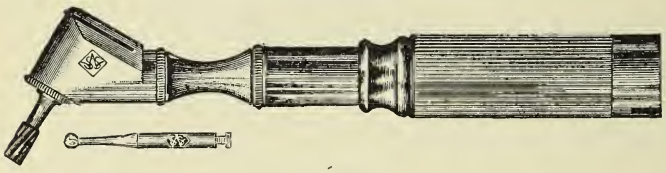
Theoretically those that have been made are all right. Practically they are all wrong. There simply isn't room in as small a thing as the head of an angle attachment for the complicated machinery necessary to make a changeable angle. It is hard enough to make a stationary angle that will last. It is impossible to make a changeable angle that will last.

It is actual economy for a dentist to buy the three different angle attachments, or if he uses the slip-joint attachment, the three different angle hand-pieces.

If he does that, he has instruments adapted to work in any conceivable position, and he has instruments that will outwear three of the changeable angles.

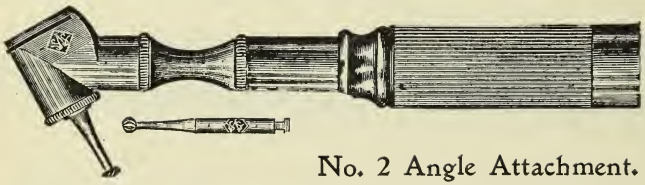
OBTUSE.

For Hand-Pieces Nos. 6, 7, and 8.



ACUTE.

For Hand-Pieces Nos. 6, 7, and 8.



No. 2 Angle Attachment.

We believe the No. 2 Attachment shown to be the best attachment made. It is simple in construction. It is easily operated, and it is the one we always send unless otherwise ordered. Price, either form, $6.00

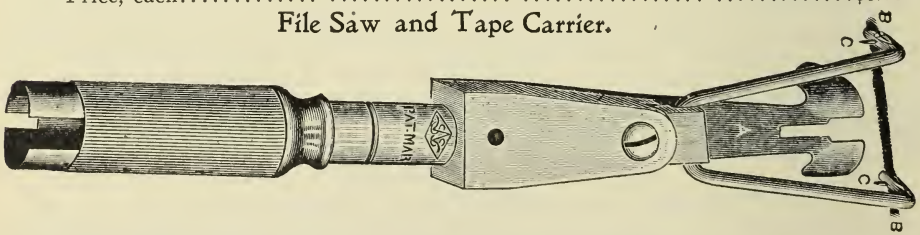
No. 3 Angle Attachment.

We supply the No. 3 Attachment when desired.

In it a split chuck with taper bearings controlled by a milled nut grasps a considerable portion of the shank of the bit, which is thus held true. A hinged cap covering the milled nut prevents the entrance of saliva into the working parts.

Price, each..... $6.00

File Saw and Tape Carrier.



This appliance brings to the work of separating, smoothing, or polishing between teeth, in any part of the mouth, the efficient help of the dental engine.

Files or tapes can be used with equal facility.

The advantages of the rapid motion of the engine in this branch of dental work, and the perfect control under which the device is run, will commend this Carrier to the dentist. Those who have used it speak of it as a very practical appliance.

PRICES.

With Fittings for Nos. 4, 6, 7 or 8 Hand-piece	each $6.00	Saws for same, single cut	per doz. .25
With Fittings for Doriot Hand-piece	" 8.00	Saws for same, double cut	" .38
with Fittings for No. 1 or 2 Slip-Joint	" 8.00	Files for same	" 1.00

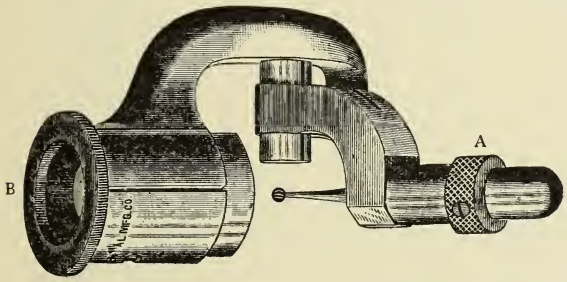
Burs at Wholesale.

Engine burs keep. No one ever heard of an engine bur going out of style. When a dentist can save 25 cents a dozen, or 16 2-3 per cent., by buying six dozen of them at one time, he would never be able to show any business man why he ever bought any less than six dozen at a time. Not in a thousand years.

We are just as willing to break open a package and deliver 1-12 of a dozen burs as we are to deliver a half gross of burs; but when a dentist can save $1.50 on an investment of $7.50, it's a wonder we ever have to break an original package.

Burs, dozen price, $1.50; per half gross.....$ 7.50
Burs, dozen price, $2.00; per half gross..... 10.50

Pocket Microscope,



For Examining Burs.

Burs ought to be bought under a glass. It is the only safe way to buy them. Any good microscope will do. This one is made for this particular purpose.

Flash a microscope on the persistent cheap bur man. It is the easiest and quickest way to get rid of him.

Price in morocco-covered case $12.00

Pocket Tool Case.

Made of leather, lined with cotton velvet, and provided with a slip cap; contains tools for taking apart and assembling hand-pieces, viz.:

A monkey-wrench, two bodkins, and two screw-drivers, with points respectively 3-64 and 5-64 of an inch wide.

PRICES.

Complete $4.50
Wrench, separately ..... .75
Screw-drivers, separately .....each .75
Bodkins, separately .....each .10

Our Own Engine Screw-Driver.

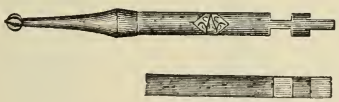
We make a very fine screw-driver for use in hand-pieces. It is almost indispensable. Knurled steel handle, revolving head. Points of blued steel.

Price, nickel plated .....$ .50
Price, bronzed ..... .35

Styles of Bit Shanks.

It is absolutely necessary to specify style of hand-pieces used when ordering bars. It is utterly impossible for our clerks to remember from one time to the next. We always send burs for No. 7 hand-piece, unless otherwise ordered.

For Cone-Journal Hand-Piece No. 6.

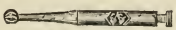


For the Nos. 4, 7, 8, and Universal Hand-Pieces.

There are at present two forms of shanks for bits for Angle Attachments, of which we give illustrations.

For No. 1 or No. 3 Right-Angle.

Length, 5/8 inch.

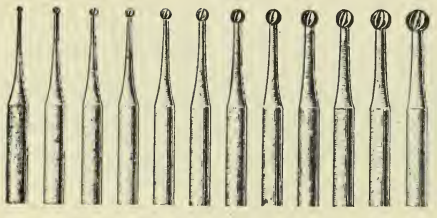


For No. 2 Right-Angle.

Length, 7/8 inch.

Excavating Burs.

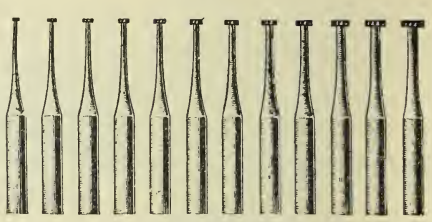
Round.



½ 1 2 3 4 5 6 7 8 9 10 11

$1 50 doz. $2.00 doz.

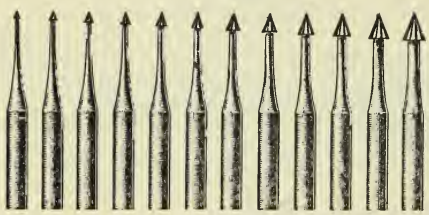
Wheel.



11½ 12 13 14 15 16 17 18 19 20 21 22

$1 50 doz. $2.00 doz.

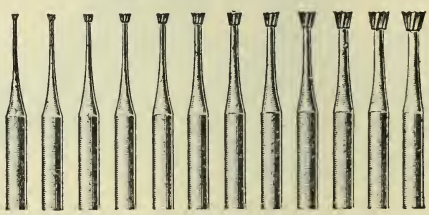
Cone.



22½ 23 24 25 26 27 28 29 30 31 32 33

$1.50 doz. $2.00 doz.

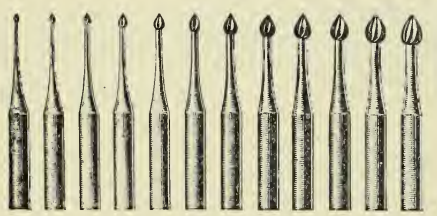
Inverted Cone.



33½ 34 35 36 37 38 39 40 41 42 43 44

$1 50 doz. $2.00 doz.

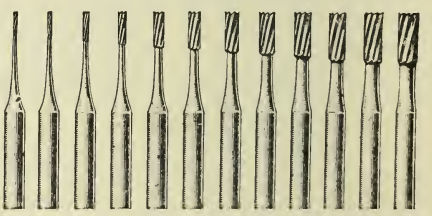
Bud.



44½ 45 46 47 48 49 50 51 52 53 54 55

$1.50 doz. $2.00 doz.

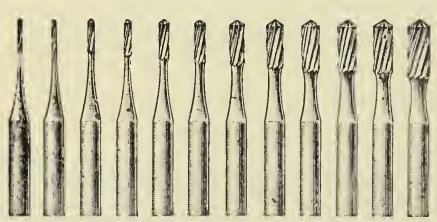
Fissure, Square End.



55½ 56 57 58 59 60 61 62 63 64 65 66

$1 50 doz. $2.00 doz.

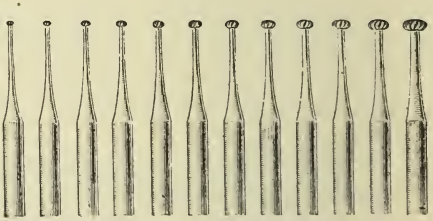
Fissure, Pointed.



66½ 67 68 69 70 71 72 73 74 75 76 77

$1.50 doz. $2.00 doz.

Oval.

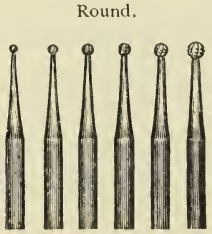


88½ 89 90 91 92 93 94 95 96 97 98 99

$1.50 doz. $2.00 doz.

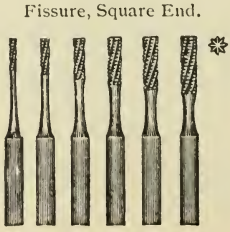
Dentate Burs for Cutting Enamel.

Round.



502 503 504 505 506 507

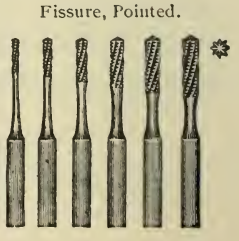
Fissure, Square End.



557 558 559 560 561 562

$2.00 per doz.

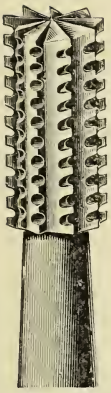
Fissure, Pointed.



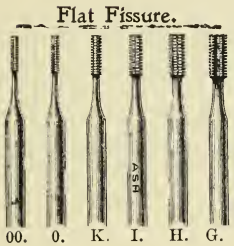
568 569 570 571 572 573

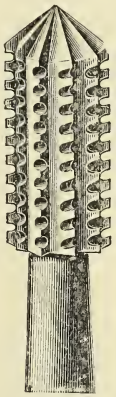
Enamel-Cutting Burs.

Made by C. Ash & Sons, Limited.

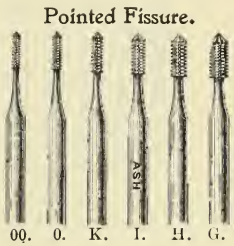


Enlarged View.





Enlarged View.

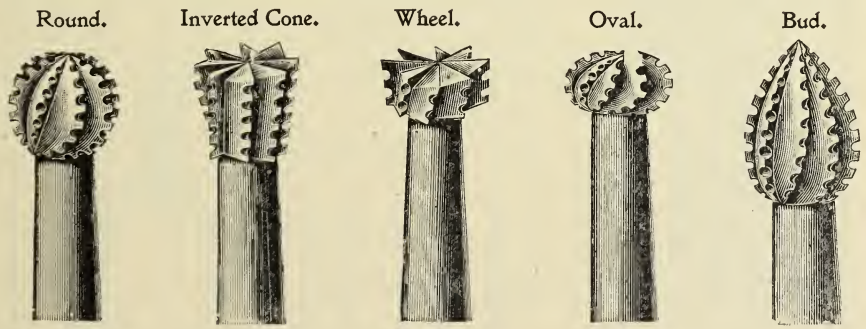


The heads of these Burs are fluted, as shown in the enlarged illustrations, each leaf is vertical, and has a saw edge. They cut enamel with great rapidity, and are very highly spoken of by those who use them.

All sizes for Handpieces Nos. 4, 7, 8..... per doz. $2.00
All sizes for any style of Angle-Handpiece or Attachment..... " 2.00

Cross-Cut Cavity Burs.

Made by C. Ash & Sons, Limited.



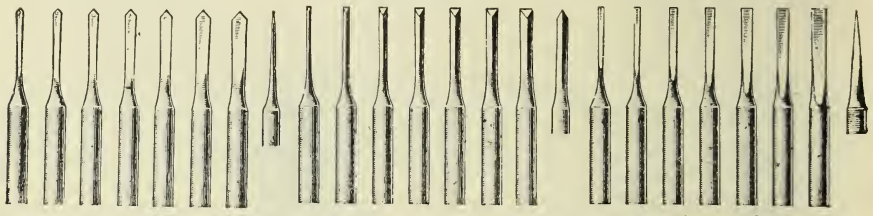
Made also in Pear Shape.

Like the enamel-cutting Burs shown above, each leaf on these cross-cut cavity Burs has a saw edge. Rapid excavation can be done with them, with little or no pain to the patient, when they are run at high speed and applied intermittingly to the tooth substance under operation. Each shape is made in twelve sizes, ranging from very small to large.

For Handpieces Nos. 4, 7 and 8.....$2.00 doz.
For R. Angle No. 2 only..... 2.00 "

Drills.

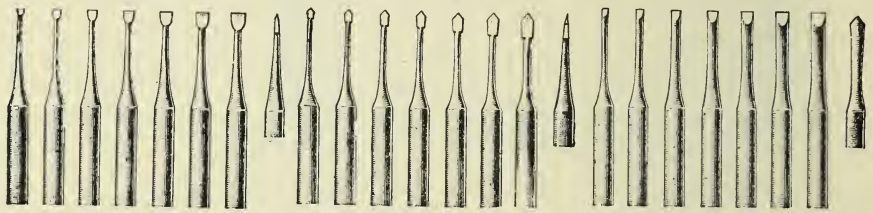
Flat, Spear Point. **Square.** **Flat, Square Point.**



100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120

$1.50 doz.

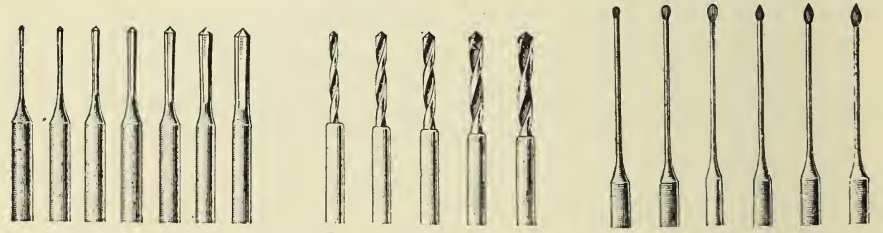
Spade **Forbes's.** **Round.**



121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141

$1.50 doz.

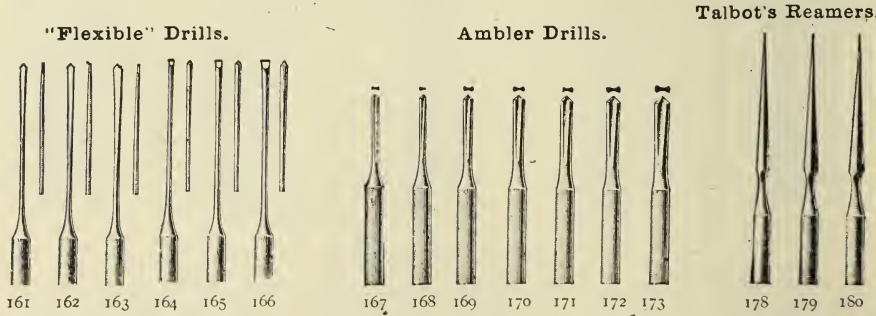
Five-Sided. **Twist Drills.** **"Flexible" Burs.**



142 143 144 145 146 147 148 150 151 152 153 154 155 156 157 158 159 160

$1.50 doz. $3.60 doz. $4.20 doz.

"Flexible" Drills. **Ambler Drills.** **Talbot's Reamers.**

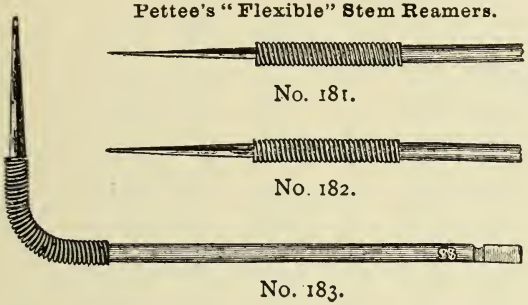


161 162 163 164 165 166 167 168 169 170 171 172 173 178 179 180

$3.60 doz. $2.25 doz. $4.20 doz.

The "Flexible" Burs and Drills have spring-tempered stems, longer than regular stock. The bur-heads are formed so as to guide easily in the canal; and they are cut, to adapt them for engine-work, of a medium fineness between cavity and finishing burs.

Pettee's "Flexible" Stem Reamers.



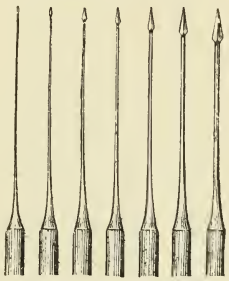
No. 181.

No. 182.

No. 183.

Price ....each $ .75

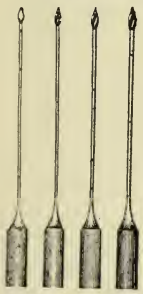
Brewer's Drills.



184 185 186 187 188 189 190

Price ....each $ .35

Gates-Glidden Nerve Canal Drills.



174 175 176 177

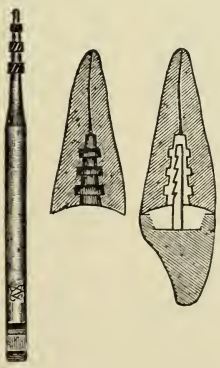
Price, each, $0.35

Drill Extractor.

Undue pressure on a Nerve-Canal Drill will sometimes cause the drill-head to break off in the canal. This Extractor has a split and threaded cone-socket, which, when carefully pushed and turned in the canal, will seize the broken drill-shank and effect the extraction. In some cases it may be best to first enlarge the canal before inserting the Extractor.

Price ....$ .60

Grooving Bur.



For cutting grooves in walls of root canals. When the grooves have been cut the canal is filled with gutta-percha, cement or amalgam. When the pin is inserted it forces the filling into the grooves, adding greatly to the strength of the operation.

Price, each ....$ .40

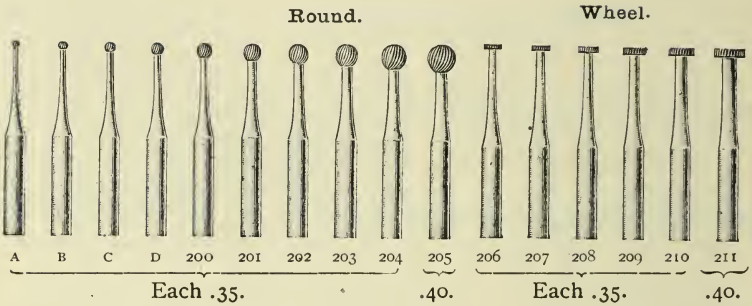
Evans' Root Trimmers.

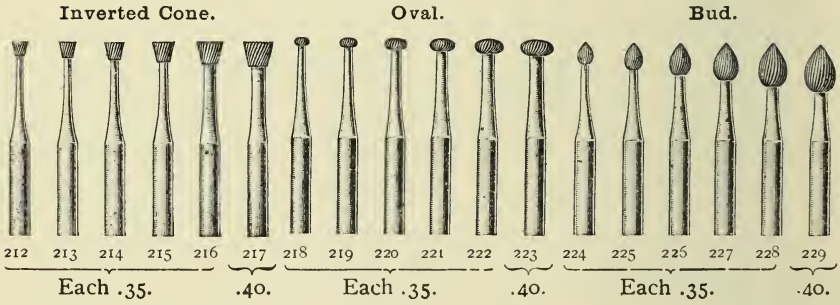
1 2 3 4

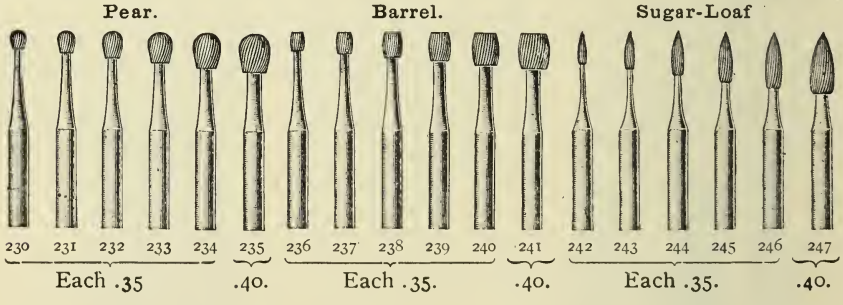
When natural crowns have been reduced by CARBORUNDUM WHEELS AND POINTS, use Reamers Nos. 1 to 3 for rounding off regular points. No. 4 is a scraper with three sides for successive use, and is used in hand socket only.

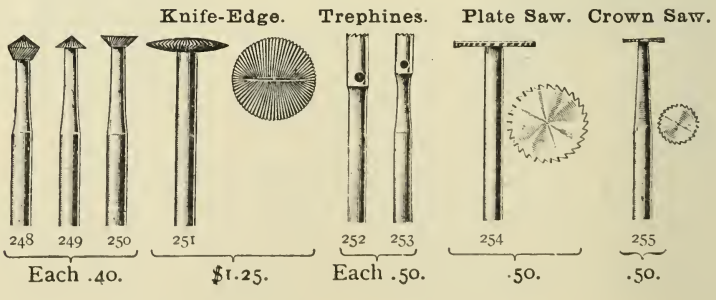
Prices, Nos. 1, 2, 3, each, 35 cents. No. 4, each, 25 cents.

Plug-Finishing Burs.

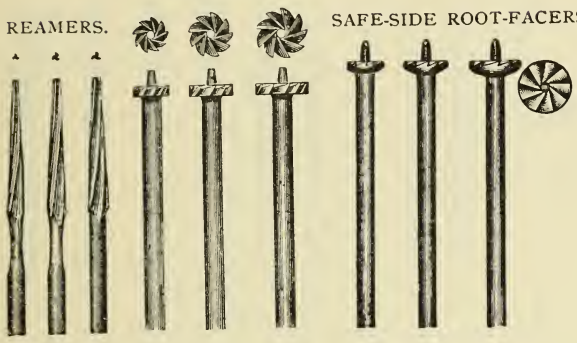








Root-Reamers and Facers.



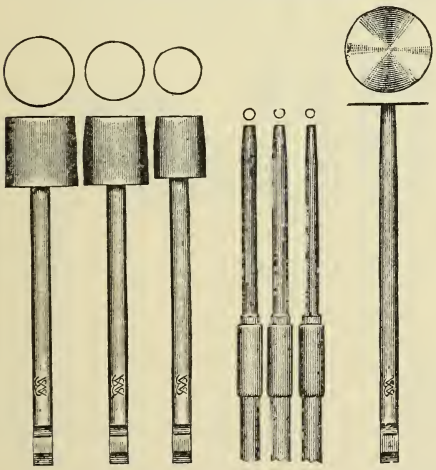
For enlarging canals and shaping natural roots.

PRICES.

Root Reamers Nos. 1, 2, 3.....each $0.60
Root Facers Nos. 4, 5, 7, 8.....each 1.00
Root Facers Nos. 6, 9.....each 1.25

Tubular and Circular Engine Knives.

For Treatment of Abscesses, etc.

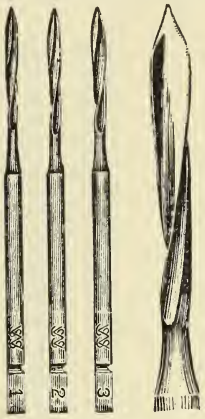


Cutting into tissue when the patient is not under an anesthetic. With the rapid motion given by the Engine they produce but little pain.

PRICES.

Nos. 1, 2, 3.....each $2.00
Nos. 4, 5, 6.....each 2.25
No. 7.....each 1.25

Peeso Root-Reamers.

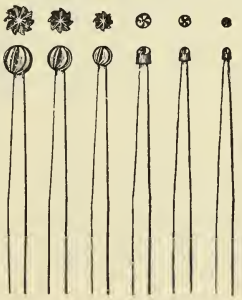


PRICES.

Nos. 1, 2, 3.....each $0.60

Allport's Burs for Cutting Diseased Bone.

In the Treatment of Pyorrhea Alveolaris, etc.



These Burs have extra long shanks to prevent the hand-piece from coming in contact with the teeth.

Made for Hand-pieces Nos. 6, 7, and 8.

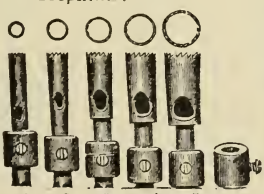
PRICES.

A, B, C.....each $0.50
D, E, F.....each .35

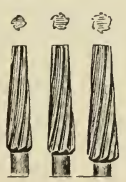
Implantation Instruments for Younger's Operations.

PRICES.

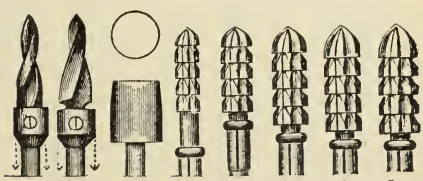
Walker-Younger Trephines.....each $1.00
Younger Reamers..... " .75
Rollins Spiral Knives, Nos. 1 and 2..... " 1.25
" Tubular " No. 3..... " 2.00
Ottolengui Implantation Reamers..... " 2.25



Walker-Younger Trephines.



Younger Reamers.



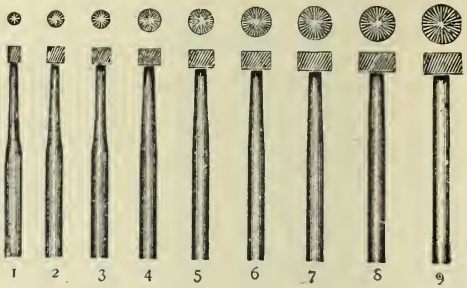
Rolling Knives. Ottolengui Implantation Knives.

Willard Countersink Burs.

PRICES.

Fissure-Bur $0.60
Convex " .... .75

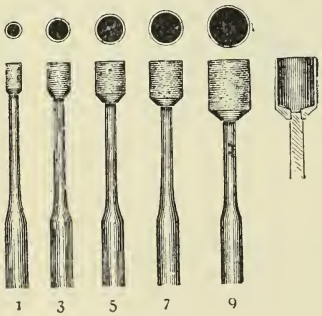
Inlay Burs.



PRICES.

Nos. 1, 2, 3, 4, 5, 6.....each $0.40
No. 7 ..... " .50
Nos. 8 and 9 ..... " .60
Set of nine 4.00

Diamond Trephines and Porcelain Inlaying.



PRICES.

Nos. 1, 3, and 5 .....each $0.50
" 7 and 9 ..... " .75

Inlay Mandrels.

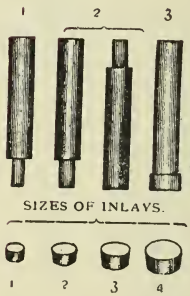
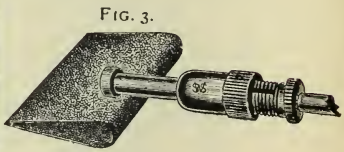
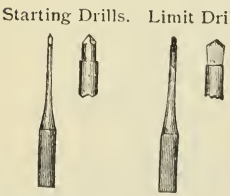


FIG. 3.



Price ..... each $0.10
" set of three ..... .25

Drills for Retaining-Points and Anchor Screws.

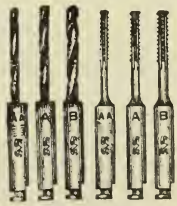


PRICES.

Starting Drills..each $0.25
Limit Drills..... " .25

Right-Angle Drills and Taps.

As used in How's Retaining-Screw Process.



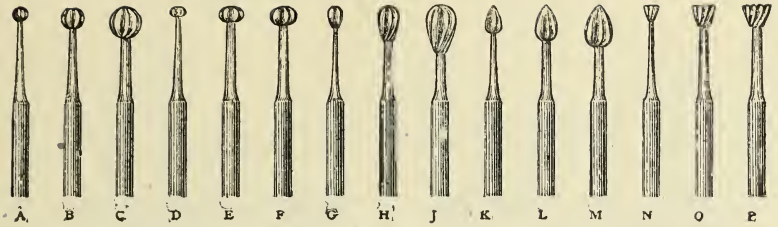
PRICES.

Drills, AA, A, or B .....each $0.30
Taps, AA, A, or B ..... " .50

Hub for Right-Angle Taps.

Price $0.20

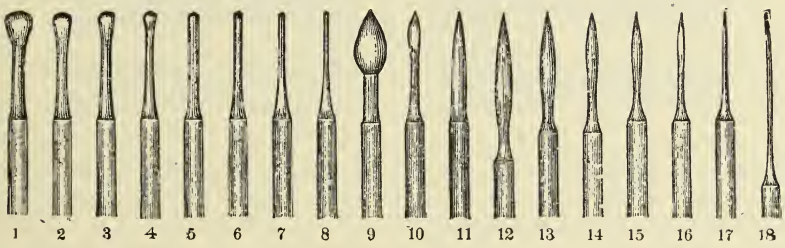
Burnishers.



PRICES.

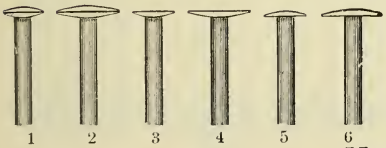
Steel, Corrugated, as shown in cut.....each $ .40
Steel, with Smooth Heads .....each .25

Herbst's Rotary Burnishers.



Price each..... ....$ .25

Steel Disk Burnishers.

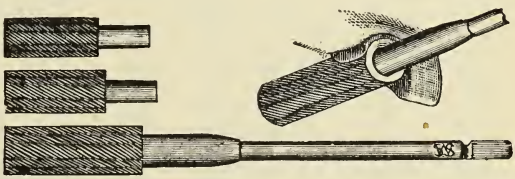


Nos. 1 and 2 are small and large Push or Pull Disks.
Nos. 3 and 4 are small and large Pull Disks.
Nos. 5 and 6 are small and large Push Disks.
Price for either No. 6, 7, or 8 Hand-piece.....each $ .40

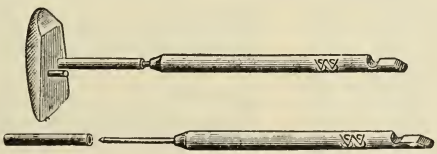
Herbst's Rotary Files.

PRICES.

Mounted, complete ..... . each $ .45
Files .... each .25
Porte-Polishers, separately..each .20



Sleeve Drills for Bridge Repairing.

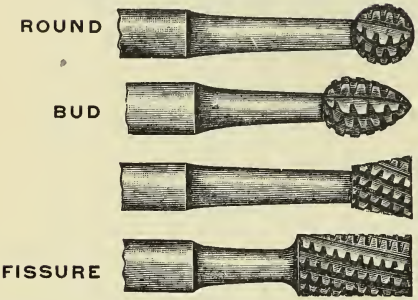


With the Bridge-Repair Pliers and the Sleeve Drill a broken bridge may be repaired without removal from the mouth.

The sleeve Drill is used as illustrated. After the new tooth is fitted to the bridge and the pins cut off to the proper length for riveting, the sleeve is slipped over the pin to act as a guide for centering the drill on the pin while countersinking.

Price ....$ .45

IVORY'S
Spiral Leaf Burs.



Besides the above shape we have them in Inverted Cone and Pear shape. Sizes from No. 3 to 8.
Price, $2.10 per Doz. $21.00 per Gross.

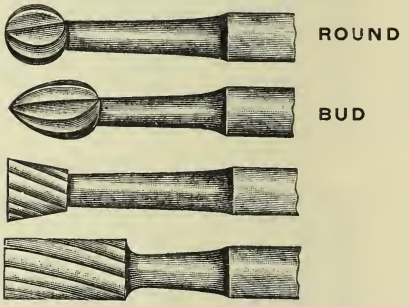
The Spiral Leaf Burs

are different from Cross Cut Burs from the fact that the teeth run in a spiral form. A tooth in one blade picking up what the other leaves. The Burs are self-cleansing and each succeeding tooth takes a fresh hold on the Dentine or enamel.

The New Process Bur.

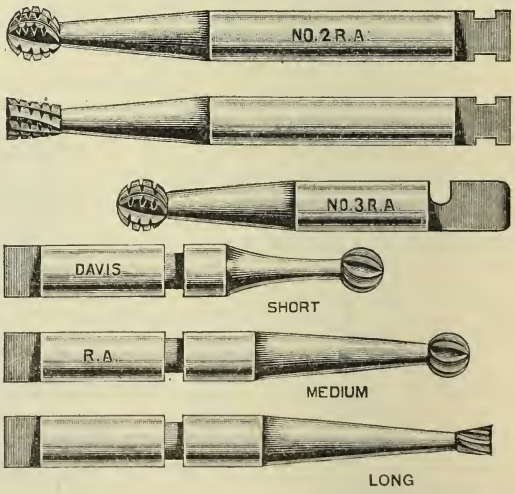
While the New Process Bur has the advantage of the Tough and Fibrous edge, it is especially an advantage to have Spiral Leaf Burs hardened under the same process which makes them the rapid and durable cutters as you will find them to be.

IVORY'S
New Process Burs.

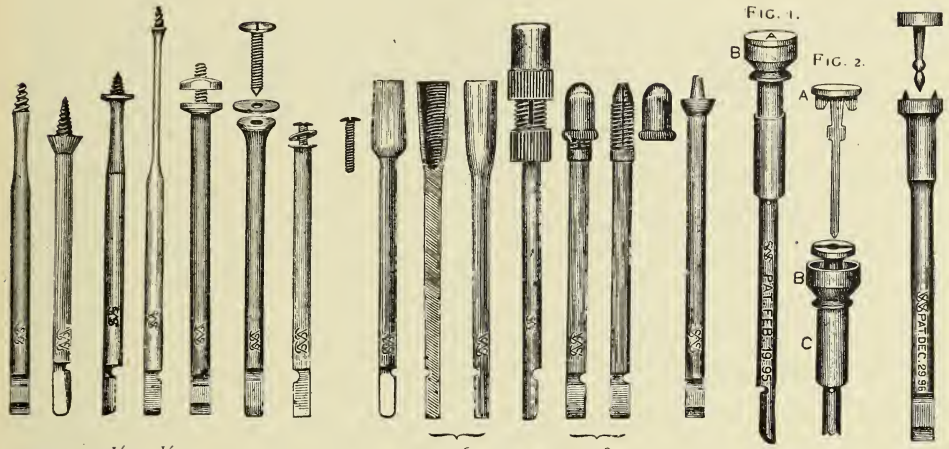


The above are made in all the different shapes of Cavity Burs.
Price, $1.50 per Doz. $15.00 per Gross.

These Burs, we claim, are better for cutting tooth substances and will last longer and will hold their shape; consequently their edge better than any other Cavity Bur on the market.

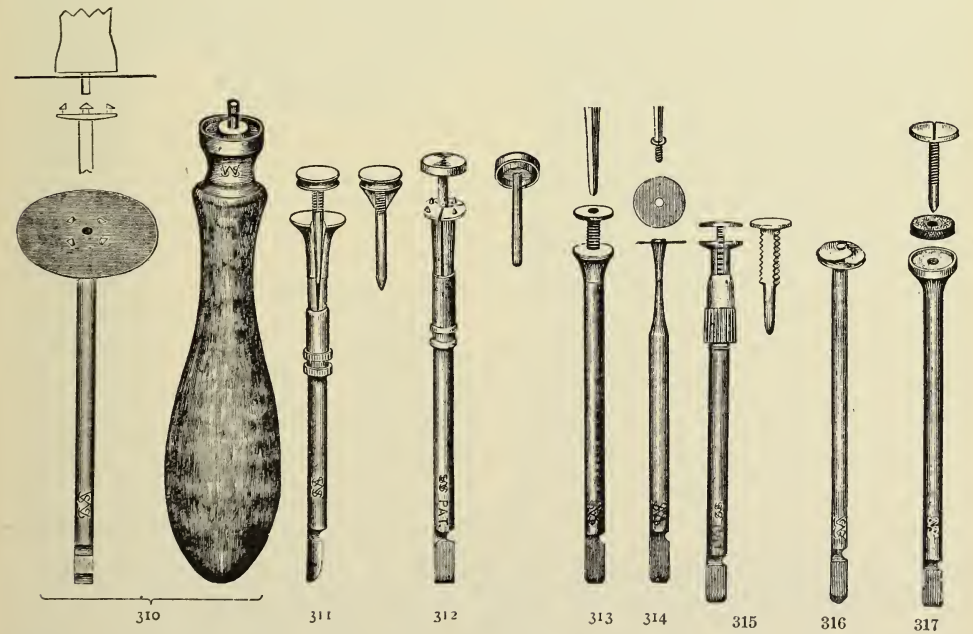


Mandrels, Porte-Polishers, Etc.



300 301 301¼ 301½ 302 303 304 305 306 307 308 309 318 329

No. 300	each	$ .07
Nos. 301, 301¼, 301½, 302	each	.15
Extra nuts for No. 302	each	.06
No. 303, Right or left hand screw	each	.15
No. 303, Right, only with spurs	each	.25
Nos. 304, 305	each	$ .20
Nos. 306, 307	each	.25
No. 308, Needle Chuck	each	1.25
No. 309	each	.15
No. 318	each	1.00
No. 320	each	.75

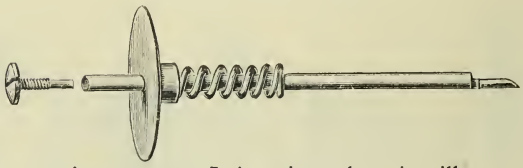


310 311 312 313 314 315 316 317

Nos. 310, 311, 312	each	$ .50
Handle for No. 310	each	.30
No. 313	each	.20
No. 314	each	.25
Screw driver for 313 and 314	each	$ .20
No. 315	each	.35
No. 316	each	.75
No. 317	each	.50

The Positive Mandrel.

Patented February 13th, 1894.



This Mandrel is a genuine success. It is universal, as it will

HOLD A PAPER DISK, HOLD A CARBORUNDUM STONE,
HOLD A METAL DISK OR SAW, HOLD A RUBBER DISK,

or anything from the $\frac{1}{1000}$ of an inch to $\frac{3}{8}$ inch in thickness. When the Screw and Spring pressure is brought to bear on the Disk, it is held as in a vise. There is no wabble, it runs true, and will not loosen or tear out; in fact, it is perfect and complete as Arkwright's Spinning Jenny.

A pin in the Shank acts as a Thread, on which the Spiral Spring rotates up or down to and from the screw head.

INSTRUCTIONS.

The Mandrel being held in the hand-piece reverse engine, run the Spring down the Shank, the entire length of coil, holding in such a manner between the fingers that the screw is removed at the same time. Thread the screw through the aperture in the Disk. Enter the guide pin of the screw into the threaded aperture in end of Shank, run engine forward by pressing the thumb on head of screw. By the forefingers run the coil up, while the Screw is engaging the thread, using a little pressure on coil to tighten. A little practice will enable an operator to work this Mandrel quicker than any in use. To hold Carborundum or other stone enlarge the aperture, so that it will pass over the end of Mandrel Shank as in above cut.

In ordering state the hand-piece you desire to use it with.

PRICE, 60 CENTS.

Paper Disks, per hundred—any grade.....$ .10
12 boxes 1.00
Metal Disks, per dozen ..... .10

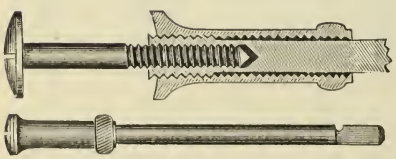
Any make of Disks will work on this Mandrel.

J. W. IVORY, 51 North Tenth Street, Philadelphia.

Improved Huey Mandrel.

Patent Applied for.
Made by Lukens & Whittington, Philadelphia.

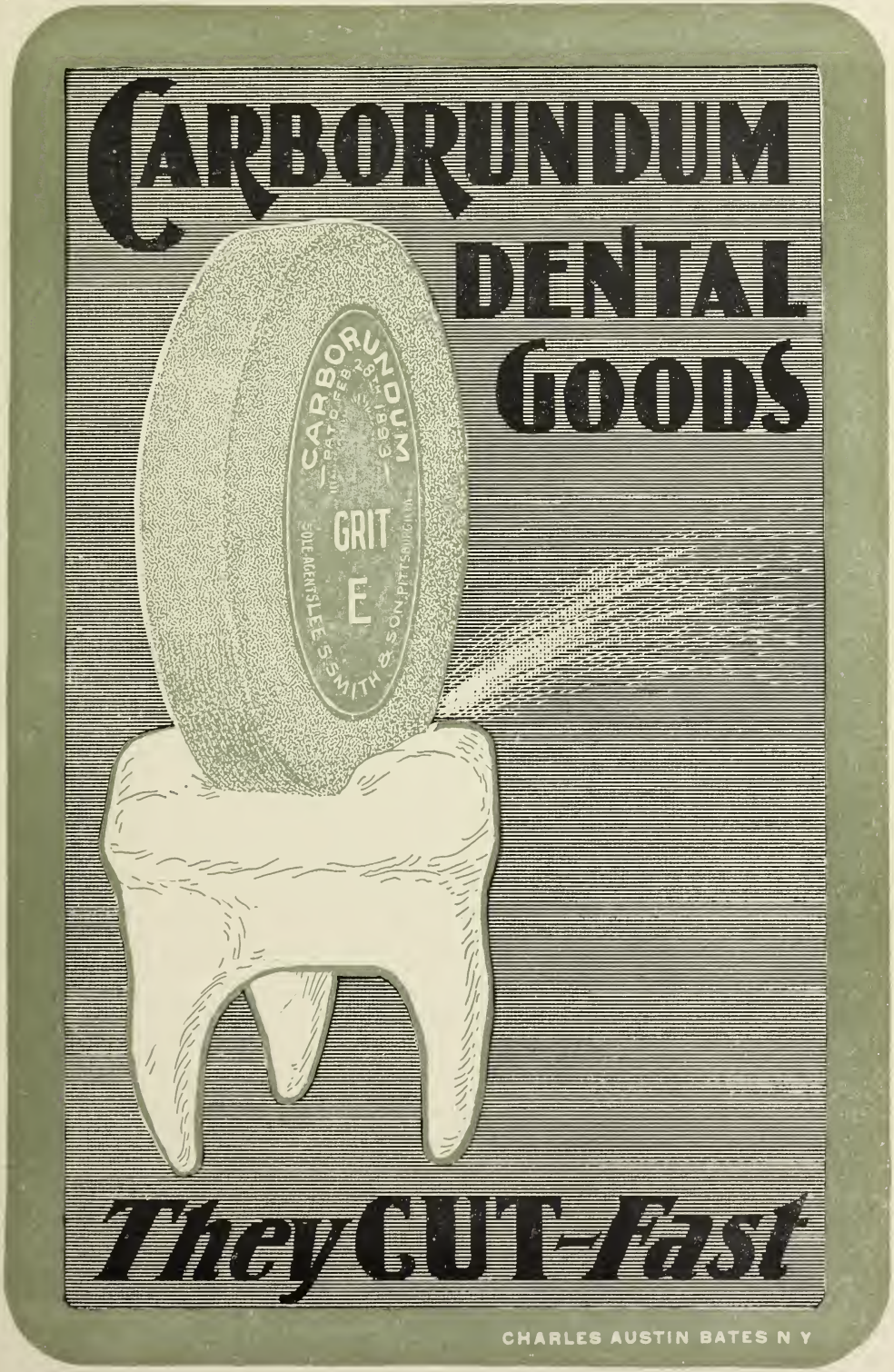
Strongest and Best.



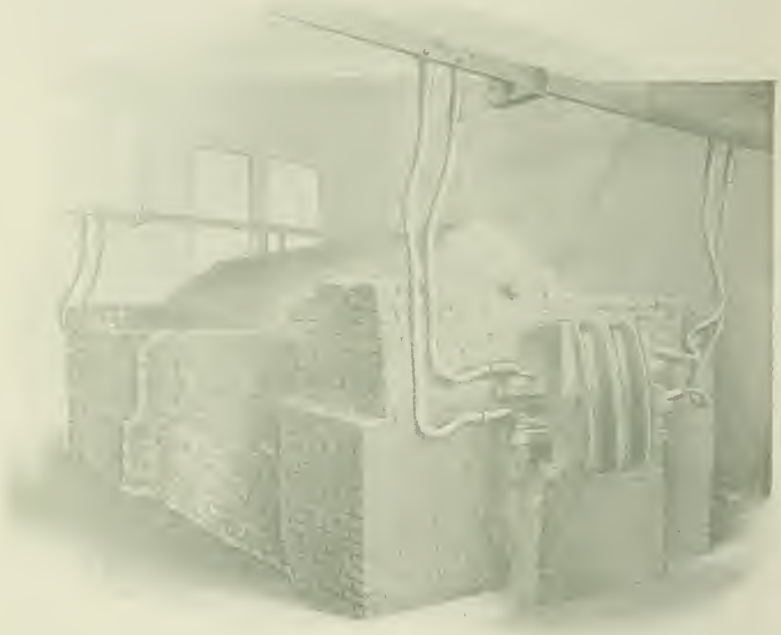
Will carry paper disk or any size stone.

The regular long screw is only threaded one-half way, which provides a smooth bearing for the stone, and a quick change from one part to another. An outer sleeve, with left thread, is fitted on body of mandrel, so that this combination makes it the strongest and most quickly changed mandrel now in use.

Price, each .....$ .50


CARBORUNDUM
DENTAL
GOODS
CARBORUNDUM
PAT. FEB. 28TH 1893
GRIT
E
SOLE AGENTS LEE S. SMITH & SON, PITTSBURGH, PA.
They CUT-fast
CHARLES AUSTIN BATES N Y

THE MANUFACTURE OF CARBORUNDUM.



Carborundum Furnace Ready to Burn.

WHAT IT IS — Carborundum is an artificial mineral. It is composed of carbon and silicon in equal atomic proportions. Its chemical formula is SiC.

HOW IT IS MADE — It is made by passing the electric current through a mixture of coke, sand, sawdust and salt. The heat generated by this current is estimated at 7,000 degrees Fahrenheit, which is probably little short of the heat of the sun itself.

ITS EARLY USES — When carborundum was invented by Mr. E. G. Acheson in 1891, it was used principally by diamond cutters for polishing diamonds and sold at $600 per pound. Two years later increased production brought the price down to $10 per pound. At the present time the Company is operating fourteen immense furnaces with a capacity every 36 hours of 14,000 pounds.

WHERE IT IS MADE — Carborundum is made at Niagara Falls by a current of 2,200 volts supplied by the Niagara Falls Power Co. This current is reduced to 105 volts by one of the largest transformers in the World, and for thirty-six hours that comparatively small voltage carries a current of 7,200 amperes, which heats the core of the furnace to incandescence. When

the current has been shut off and the furnace allowed to cool for four or five hours, the unchanged mixture is raked off the top of the furnace, exposing beautifully colored crystals radiating to a distance of 12 to 14 inches from the core.

HARDNESS OF THE CRYSTALS

These crystals are crude carborundum. Any one of them will scratch the surface of a diamond. They are absolutely insoluble in any water or in any acid, and infusible at any attainable heat.

POWER USED

It requires 48,000 horse power hours per day to meet the present demand for this marvelous material.

FROM START TO FINISH

The plant of the Carborundum Co. is as complete and perfect as science and art, backed by unlimited capital, can make it. The product embraces the processes from raw material to the finished article. Not one single solitary thing has to be done outside.

SEPARATING AND CLEANING CRYSTALS

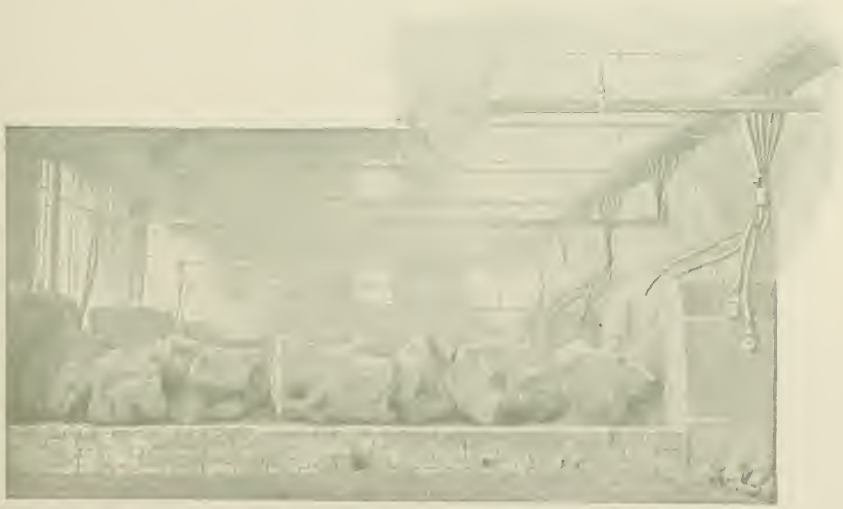
When the crude carborundum has been removed from the furnace it is crushed into grain form, and after being treated with acids for several days is thoroughly washed, dried and graded. It is then ready to be made into wheels.

THE BOND

Carborundum wheels are made with a vitrified bond. In making the wheels the carborundum is mixed with certain proportions of Kaolin and Feld-spar. The mass is placed in a mould and pressed in a hydraulic press.

VITRIFYING THE WHEEL

A carborundum wheel is vitrified in a kiln similar to a kiln used in making porcelain-ware. It requires seven days to fire it. When the wheel is removed from the kiln it is ready for



Carborundum Furnace After Burning.

CARBORUNDUM ENGINE GOODS

AT REDUCED PRICES.

CARBORUNDUM DOESN'T GRIND. IT CUTS.

Square Edge Stump Wheels.

Each, 8 cents.
Per doz., 90 cents.

Each, 8 cents.
Per doz., 90 cents.

Round Edge Stump.

Each, 8 cents.
Per doz., 90 cents.

Knife Edge Disks. **Thick Centre and Thin Edge Disks.**

Each, 8 cents. Per doz., 90 cents.

CARBORUNDUM ENGINE GOODS

AT REDUCED PRICES.

CARBORUNDUM CUTS. IT DOESN'T GRIND.

Cup Shapes.

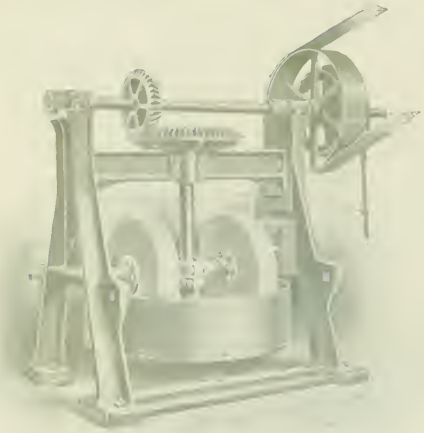
Each, 8 cents.
Per doz., 90 cents.

Points.
Each, 8 cents. Per doz., 90 cents.

Round Edge Points.
Each, 5 cents. Per doz., 50 cents.

Points.
Square and Round Edge.

Each, 5 cents. Per doz., 50 cents.



The Grinder.

business. If it passes the eye of a corps of men paid to look for imperfections it is ready for the market.

MERIT OF THE GOODS

The element of chance hasn't entered into the success of this enterprise. There hasn't been any accident about it. The Company has prospered and increased its capacity simply and solely because carborundum is a better abrasive than any other abrasive.

CARBORUNDUM IN DENTISTRY

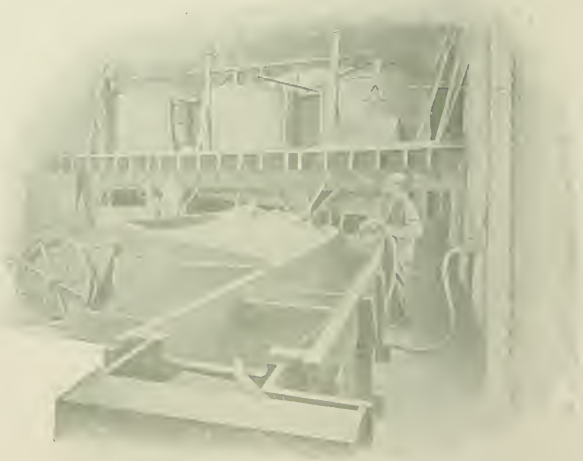
One of the earliest uses of carborundum was in the dental office and laboratory. It has revolutionized this particular feature of a dentist's work. It has found its way into every dental office in the United States. It is saving seventy-five per cent. of the time of every man who uses it. It will actually and positively cut four times as fast as corundum. It may be used wet or dry.

REDUCED PRICES

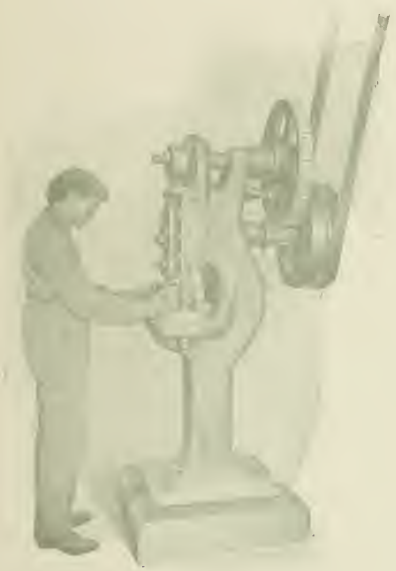
When carborundum disks and stump wheels were introduced the uniform price was 60 cents each, and several hundred thousand of them were sold at that price. As production was increased the Dental Profession was first to receive the advantage of decreased cost in the form of a reduction in price on engine goods to 15 cents each, and a cut of 50 per cent. on lathe wheels.

PRESENT PRICES

In the summer of 1900 the price on engine goods was still further reduced to 8 cents each, a dozen rate of 90 cents established and the lathe wheels reduced 33 1-3 per cent. The quality of the goods has not been affected. All carborundum goods are better made to day than they were ever made before.



Where Carborundum Receives its Chemical Treatment.



Small Press.

NO SOFT SPOTS

The wheels are absolutely uniform. There can't be any possible chance of a soft spot in them. The method of mixing the crystals and bond makes us absolutely certain about that.

HELP THE WHEEL

If the wheels become untrue after long use it is because they are not being properly used. They are being run too slow or the work is being crowded too fast.

OUR GUARANTEE

All carborundum goods are guaranteed to be free from soft spots. They are guaranteed to remain perfectly true if properly used. They are guaranteed without any qualification never to glaze or wear smooth.

BOGUS GOODS

The genuine carborundum dental goods are being imitated. All good things are bound to be imitated. They are being made by unscrupulous parties of broken up machine wheels made by the silicate process, or with a shellac bond. They are being sold by unscrupulous dealers for the sake of additional profit. No dentist who has ever used the genuine article will ever buy the imitation of it. It isn't necessary for us to tell any man who has ever used the genuine article that no other material or combination of materials will give as good results. A dentist knows what he wants. If he asks for GENUINE carborundum he will get it. If he doesn't get it we would like to know of it.

The Carborundum Company are the only manufacturers of carborundum in America.

Lee S. Smith & Son are the sole agents for the dental trade in the United States.

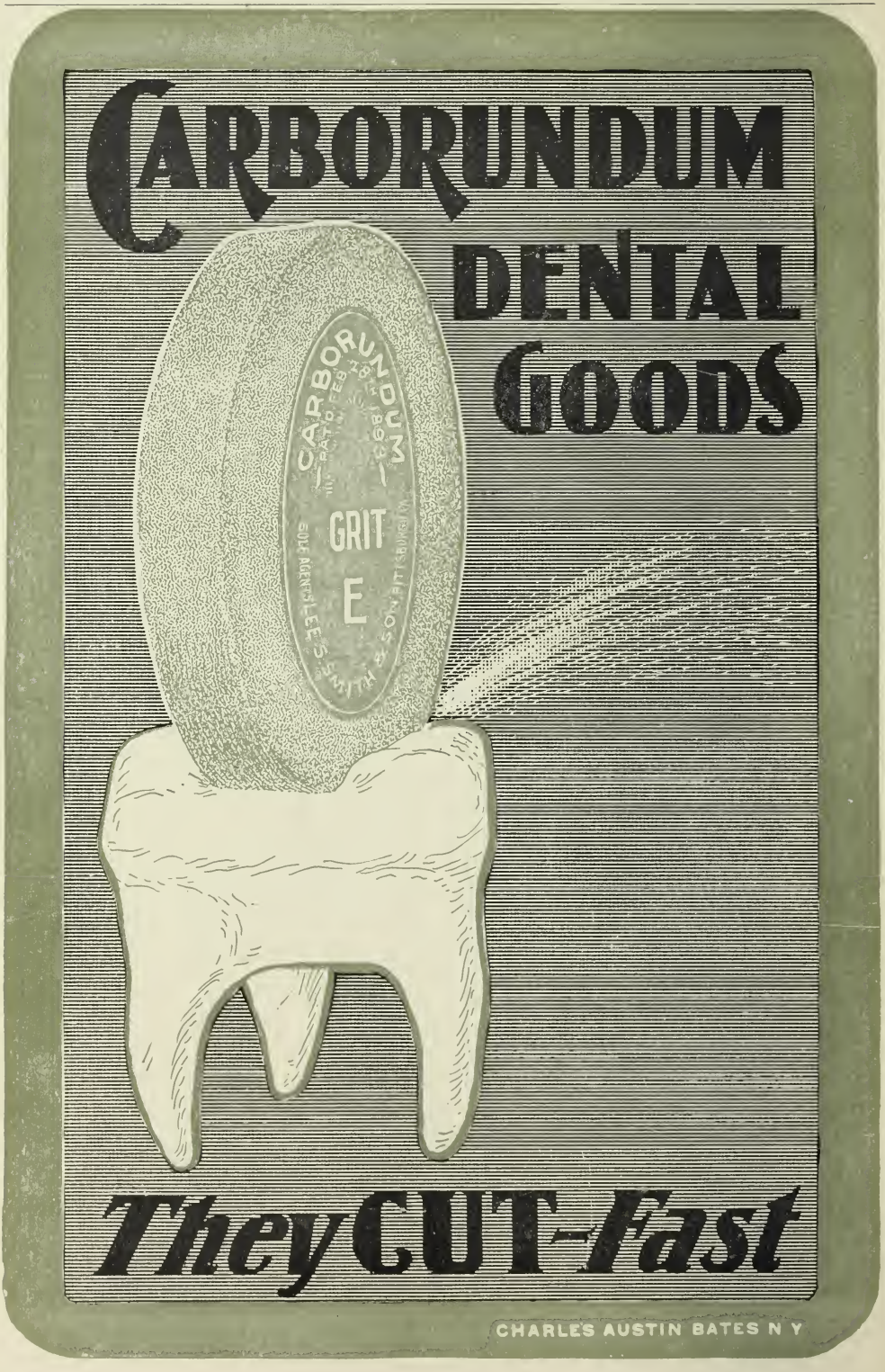
We are represented in all of the larger cities by first-class dealers only.

LEE S. SMITH & SON,

Sole Agents.

PITTSBURG, PA.

A Section of the Kiln Room.


CARBORUNDUM
DENTAL
GOODS
CARBORUNDUM
PAT. FEB. 28TH 1893
GRIT
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NILES-BEMENT-POND CO. NEW YORK
SOLE AGENTS LEE S. SMITH & SON PITTSBURGH PA.
They CUT-Fast
CHARLES AUSTIN BATES N Y

The Watson

Paper Disk Mandrel.

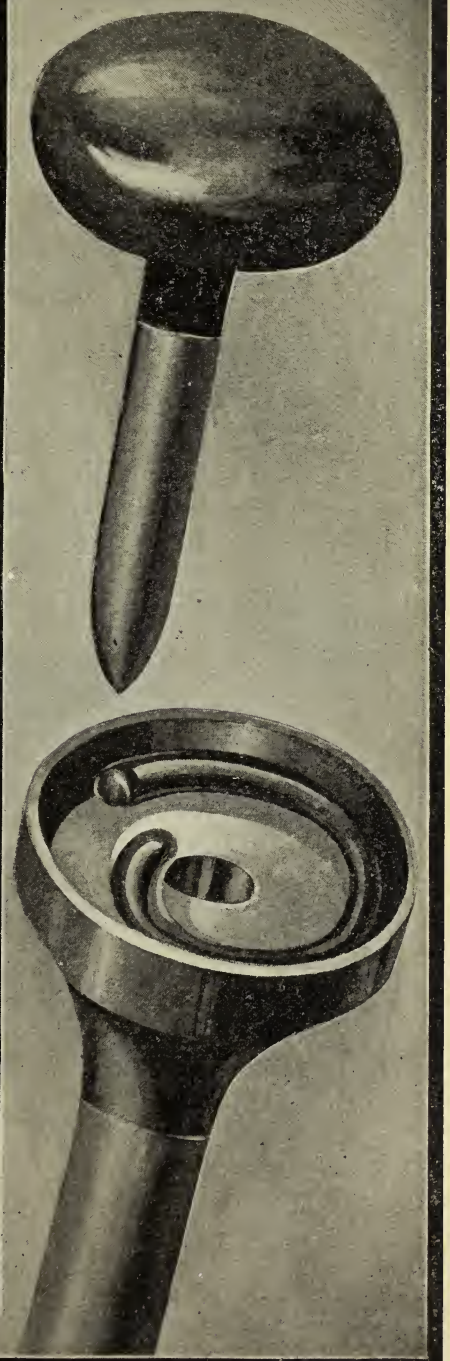
This is an enlarged picture of the business end of a Watson paper disk mandrel.

The spring shown in the lower cut is made of hardened steel. Of course it is covered up inside the mandrel. When the pin goes in it jams against that spring. The spring holds the pin in place. It is guaranteed never to break. It can't ever let go of it until the right time comes. When the right time comes—a pull and it's off in a jiffy.

It is easier to work the Watson paper disk mandrel than any mandrel made. No other mandrel holds a disk any tighter.

Price, each $0.75

Lee S. Smith & Son, sole agents, Pittsburg.



Flexible Mandrels.

This Mandrel has a spring on it. The spring is a good thing. It gives the Carborundum disk or point a soft yielding contact with the filling or tooth. The patient will appreciate that feature. The operator will appreciate the variation in the contact. Made in three styles.

A. has a screw pin, as shown, for carrying Carborundum Engine goods.
Price .....each $ .50

B. has a small screw cone for carrying felt, soft rubber points, etc.
Price .....each .50

C. For carrying wood points, etc.
Price .....each .35

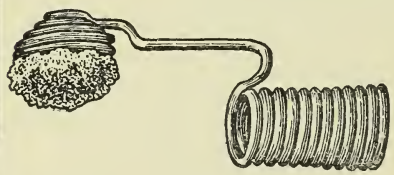
Mandrels for Carborundum Wheels and Points.

No 3.

Made to snugly fit center holes of the Carborundum Engine goods. The offset is made of three lengths, 1-16, ⅛ and ¼ inches. A drop of cement is placed upon the wheel or disk and the Mandrel inserted. Heat applied to Mandrel causes cement to set immediately.

Price, per doz.....75 cents.
Price, each ..... 7 cents.

Disk Moistener and Cheek Protector.



This is a clever device. It is made of aluminum. It fits over the nose of any hand piece. The mere act of putting it there keeps it there. The extension carries a little sponge. The sponge carries enough water to keep a stone wet for a long time. It is possible to spend a good deal more money to get a thing to do the work this moistener does, but no amount of money will get anything to do the work more effectively. Six extra sponges are included with every outfit.

The price is an even 25c each.

Trade supplied by Lee S. Smith & Son, Pittsburg, Pa.

Edwards Disk Moistener.

An arrangement of rubber bulb to be filled with water. Compression of bulb projects water through nozzle against disk.

Price, each $1.00

Melotte's Moistening Pad and Holder.

The pad is made of layers of cotton stitched together. The holder is for holding the pad to its work.

PRICES.

Moistening pads, per box .....$ .40
Holder ..... .60

Bur Shank Shield.

Simply a soft rubber disk for stretching onto shank of mandrel, etc. It protects the hand-piece by keeping out the water.

Price, per box of 50.....$ .12

Ash's Grooved Diamond Discs.

Made by C. Ash & Sons, Limited.

(Registered. Reg. No. 310,731.)

One of the most prominent and valuable features in these Diamond Discs is, that they will last twice as long as any other, and are not so readily spoiled by the application of pressure to the sides and edge. They should be kept well wetted with water during use and run at high speed.

In our practical, every-day experience of Diamond Discs we find that these grooved discs will not only stand hard wear, but that they are superior to any other which we have ever tried.

We make them in two forms as under:

(a) *Charged on both sides and on edge;* extremely thin and sharp; eminently adapted for cutting fine grooves in mineral or porcelain inlays and rods; for slicing purposes; for separating teeth and fillings in the mouth, etc.

Sizes—½-inch and ¾-inch diameter.....each $1.25
Sizes—⅞-inch diameter .....each 1.25

(b) *Charged on both sides, but not on edge;* very useful for smoothing and contouring the surfaces of inlays and hardened fillings, and for imparting little touches of individuality to mineral teeth and crowns, which many dentists make it their aim to produce, in imitation of the patient's natural teeth.

Sizes—½-inch and ¾-inch diameter.....each $1.25
Sizes—⅞-inch diameter .....each 1.25
Cup-shape, *charged on both sides and on edge,* ¾-inch and ⅞-inch diameter .....each 1.25

Diamond Drill.

Made by C. Ash & Sons, Limited.

For Making Cavities in Artificial Teeth, &c.

In using this Diamond Drill in the Engine the tooth or other article to be drilled should be placed on a board or table; it cannot be sufficiently well supported in the hand to bear the pressure necessary to bore into a hard substance.

Turpentine or water should be used as a lubricant.

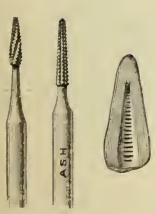
PRICE.

For No. 4 or No. 7 Hand-piece $1.50

Root Rougheners.

Made by C. Ash & Sons, Limited.

(Suggested by Mr. W. R. Humby.)



1 2

Fig. 1 is flame-shape, and Fig. 2 has a long, square, tapering head. They are both made with saw edges, like the enamel-cutting burs shown on page 155.

Mr. Humby says:—"The advantages I claim for the root rougheners are:—

"1. That the hole may be roughened in the widest diameter of the root; and,

"2. That the size of the grooves is automatically proportioned, as shown by the section of the root illustrated, the larger grooves being in the thick end, while the smaller ones are at the apex, with tapering intermediate sizes."

PRICE.

For Hand-pieces Nos. 4, 7, 8.....(Figs. 1, 2) $2.00

Diamond Disks, Wheels and Points.

When we say Diamond Disks, wheel and points, we mean copper disks, wheel and points charged with diamond dust. The diamond dust is forced into the copper. It stays in it as long as the point is kept wet. If used dry for a fraction of a minute, the copper is heated, and the cutting quality of the article destroyed.

Diamond Disks.

REGULAR.—Charged all over. The regular are always sent unless Thin or Safe-Side are specified. Two sizes: No. 1, ¾-inch; No. 2, ⅞-inch.

THIN.—Charged all over. Same sizes as the regular.

Price of either Regular or Thin.....each $1.75

SAFE-SIDE.—Charged on one side only, the other made smooth or "safe," thus doing away with the need of a shield. Two sizes: No. 1, ¾-inch; No. 2, ⅞-inch.

Price .....each $1.25

FISSURE.—Will cut on both sides the same as the "Regular" Disks. They are made 5-16-inch in diameter. The center holes are made sufficiently large to admit the screws of Mandrels Nos. 304 and 313. They can also be used on Mandrels Nos. 304 and 314 by properly centering the Disk before tightening the screw.

Price .....each $ .50

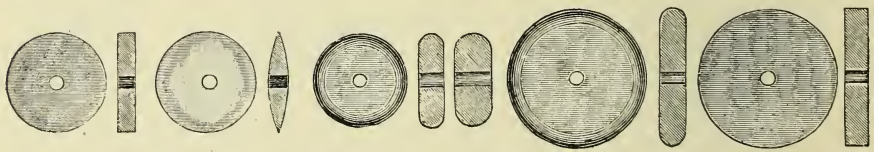
SMALL FISSURE.—Diameter, 3-16-inch. Charged all over. Permanently mounted, not sold unmounted.

Price .....each $ .50

DIAMOND STARTING POINT.—For removing the enamel surface as a starting-point in drilling natural or artificial teeth. As it is charged all over, it will also be found excellent in smoothing cavity-margins and other uses.

Price, each .....$ .50

Diamond Wheels.



No. 1. Square Edge. | No. 2. Knife Edge. | Nos. 3 and 4. Round Edge. | No. 5. Round Edge. | No. 6. Square Edge.

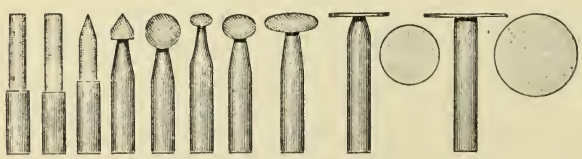
The value of Diamond Wheels in heavy work, as the dressing of roots, is well known. Made in six sizes and forms. Nos. 1 and 2 are charged all over; Nos. 3, 4, 5 and 6 on the edge only, with smooth sides.

Can be used on Mandrels Nos. 302, 303, 313, 317, 319 A.

PRICES.

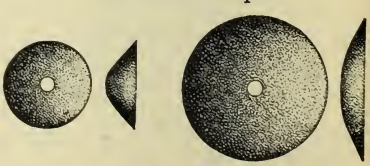
No. 1, Square Edge ½-inch diameter.....each $1.25
" 2, Knife " " " " ..... " 1.25
" 3, Round " " " " Thin... " 1.00
No. 4, Round Edge, ½-inch diameter, Thick each $1.25
" 5, " " ¾ " " ..... " 1.75
" 6, Square " " " " ..... " 1.75

Diamond Points.



1 2 3 4 5 6 7 8 9 10

Diamond Cups.



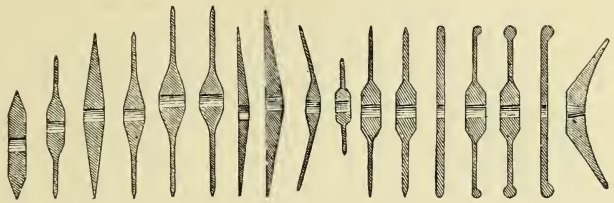
No. 1. No. 2.

PRICES.

Nos. 1, 2, 3, 4, 5, 6, 7 ..... each $0.50
Nos. 8 and 9 ..... " .75
No. 10 .....each $1.00
No. 1 .....$1.75
No. 2 ..... 2.00

The Points are charged all over. Used with Porte-Polisher No. 307.

Arthur's Corundum Disks.



A B C D E F G H I K L M N O P Q R

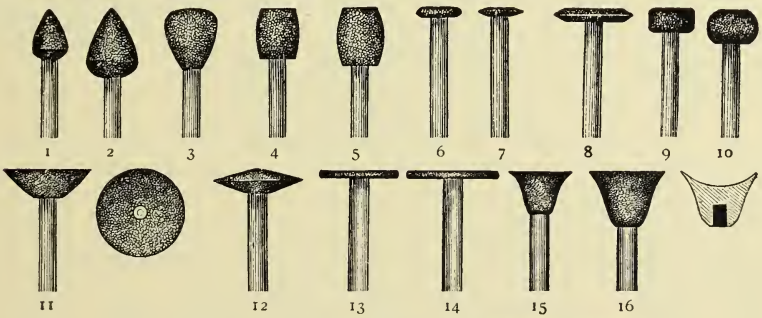
Two Grits: Cutting and Polishing.

Price, not mounted .....each $ .05; per doz. $ .50
Price, mounted .....each .13; per doz. 1.50

Gem Disks.

Made in same style as Arthur's; shown above, with exception of O. P. Q.
A to N, and R, not mounted.....each $ .07; per doz. $ .75
A to N, and R, mounted.....each .15; per doz. 1.75

Corundum Points.



1 2 3 4 5 6 7 8 9 10

11 12 13 14 15 16

Butler's Corundum Point.
For Porte-Polisher No. 305.

1 2 3

Root-Dressing Corundum Points and Corundum Cavity Points.

Not mounted .....each $ .03; per doz. $ .25
Mounted (excepting Butler's)....each .11; per doz. 1.25
Mandrels, separately .....each .07; per doz. .75

1 2 3

Gem Points.

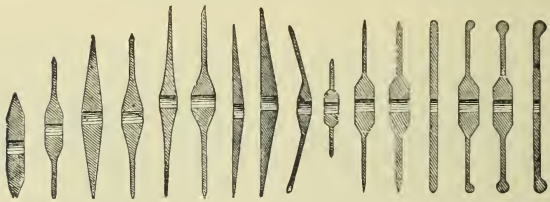
Made in same style as above points.
Nos. 1 to 16, not mounted.....each $ .04; per doz. $ .40
Nos. 1 to 16, mounted.....each .12; per doz. 1.40
Gem crown wheels .....each $ .07; per doz. $ .75
Gem Stump wheels, unmounted.....each .07; per doz. .75
Gem stump wheels, mounted .....each .15; per doz. 1.75
Gem Cup, not mounted..... per doz. .40
Gem Cup, mounted ..... per doz. 1.40

Shellac for Mounting Disks and Points.

Shellac prepared in sticks ¼-inch diameter, 2½ inches long, put up in boxes of one dozen. Prepared also in powder for the same purpose.

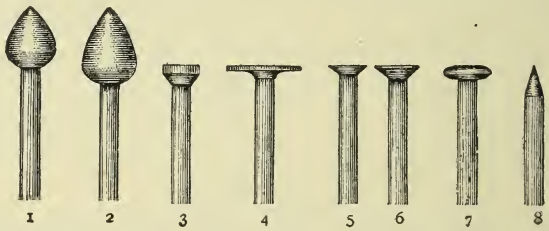
Price, in Sticks .....per box $ .25
Price, in Powder .....per box .10

Rubber and Corundum Disks.



Made of Corundum thoroughly incorporated with vulcanized rubber.
Price, not mounted.....each $0.05

Rubber and Corundum Points.



Made of corundum, thoroughly incorporated with vulcanized rubber, to be used with Mandrels 307 or 319 C.
Price.....each $0.05

Wood Polishing Points.

Exactly same forms as rubber and corundum points shown above, with addition of a more tapering point similar to No. 8.
Assorted, nine forms (100 in a box).....per box $0.60
Separately, Nos. 1, 2, 7 (100 in a box).....per box .75
Separately, Nos. 3, 4, 5, 6, 8, 9 (100 in a box).....per box .50

Corundum Stump Wheels.

SQUARE EDGE.—Made in four sizes, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$ and 1 inch and three thicknesses, 1-16, $\frac{1}{8}$ and 3-16 inch.
Unmounted.....each $0.05; per doz. $0.50
ROUND EDGE.—Made in three sizes, $\frac{1}{2}$, $\frac{3}{4}$ and 1 inch and two thicknesses, $\frac{1}{8}$ and 3-16 inch.
Unmounted.....each $0.05; per doz. $0.50
Mounted.....each .13; per doz. 1.50

No. 1.

No. 2.

SAFE EDGE.—Made with brass tire for grinding sides of natural crown without wounding gum.
Unmounted, 1 inch diameter
.....each $0.15

Bright-Metal Shields.

Thin metal disks for making carborundum wheels, etc. Safe sided. Two sizes, $\frac{5}{8}$ and $\frac{3}{4}$ inch.
Price.....each $0.05

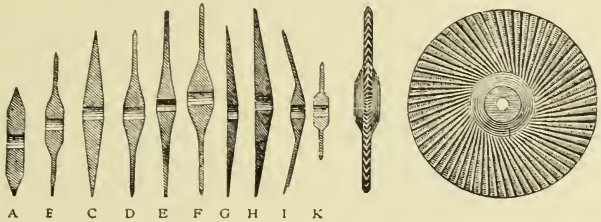
Disk Mounter.

This is a machine for mounting Carborundum or other abrasive disks. It mounts them true. It can't guess. It can't make a mistake.

Price.....each $1.00

Corrugated Soft-Rubber Disks.

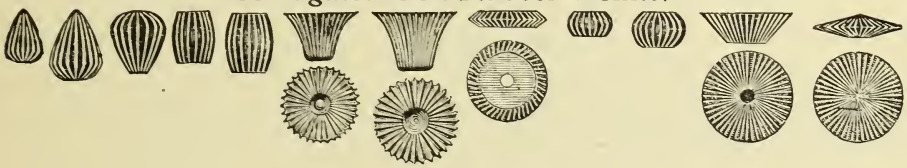
Suggested by Dr. C. F. Francis.



The corrugated surface carries powders either for finishing fillings or for polishing the natural teeth.

Price.....each $0.05

Corrugated Soft-Rubber Points.

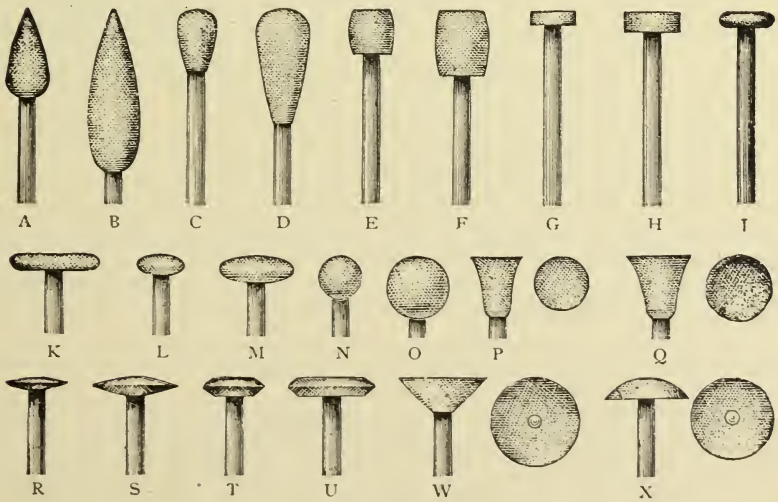


PRICE.

Nos. 1 to 12.....per doz. $0.40; each $0.04

Arkansas, Hindostan, and Scotch Stones.

Not Supplied Unmounted.



PRICES.

Arkansas Stones.....each $1.00
Hindostan Stones ..... " .50
Scotch Stones..... " .30

New Diamond Drills.

Made by H. D. Justi & Son.

These Diamond Drills are entirely different from any others heretofore in use, and should not be confounded with them.

The Diamond Points in these Drills are CAREFULLY SELECTED for the purpose, and are of the VERY BEST QUALITY; they are set in the steel shanks in such a manner as to render it simply impossible for them to become loose or drop out.

The Diamond having considerable projection from the shank THE POINT IS LEFT PERFECTLY FREE without the metal part offering any resistance whatever in the manipulation. While in use the Drills should be kept constantly wet or in oil, and too heavy a pressure on them during the operation should be avoided. It would also be well to withdraw the Drill repeatedly from the cavity in order to prevent binding, and have it always work free. A breakage is only possible in cases where the Drill has been improperly used.

Price, each $3.00

Dollar Diamond Drill.

We have a Diamond Drill we sell at a dollar. Of course it isn't as good a drill as the above drill, but it's a big dollar's worth of drill. It is not warranted in any way. It is made as well as it can be made, and is sold without guarantee.

Price, each..... $1.00

Genuine Moose Hide Polishers.

Shellac Centers. Easily Mounted. No Time Required. No Trouble.

DIRECTIONS FOR MOUNTING.

Either a screw-pointed engine mandrel or an old bur can be used, by simply heating the point in the flame of a spirit lamp and when hot screwed into the center of the Polisher. It cannot come off when engine is reversed, and will be ready for instant use whether engine runs in either direction, thus obviating the difficulty of keeping the polisher on the mandrel. The advantages secured from using Moose Hide Polishers and Shellac Centers are:

Being small and thin, they can be run around and between teeth, and will not abrade the gums, thereby making them the safest and only polisher that should be used on the teeth, and being of such even material the enamel will not be harmed and all discolorations can be readily removed.

The beautiful finish they give to fillings—gold and amalgam—have endeared them to the operator, who daily enters his testimony in their favor.

The ease of mounting them and "staying mounted" makes them worth double any other polisher on the market. You can only get the staying qualities with the shellac centers.

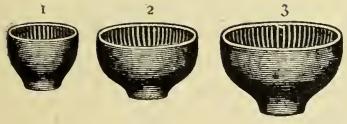
Put up 50 in a box. Price,..... $ .30

H. D. JUSTI & SON,

Chicago, 66 Madison Street. Philadelphia, 1301 and 1303 Arch Street.

Soft Rubber Polishing Cups.

Corrugated Inside.

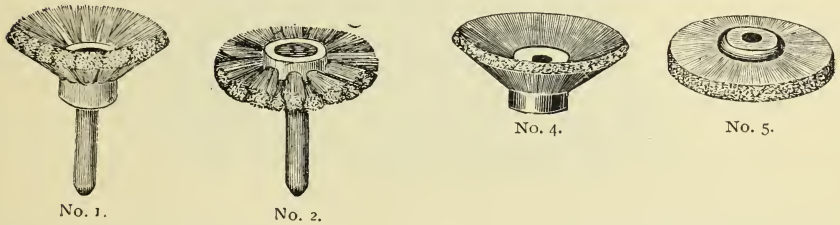


The cup adapts itself to the shape of the tooth, carrying the polishing powder to every portion of the surface.

Price .....each $ .05

Tooth-Brush Wheels.

Bone Center. Metal Center.



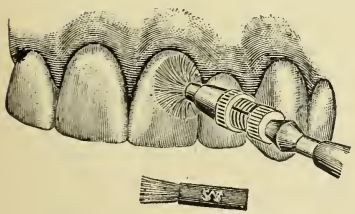
No. 1. No. 2. No. 4. No. 5.

Nos. 1 and 2 are made of three grades of bristles: soft, medium and stiff.
Nos. 4 and 5 are made only of two grades: soft and stiff.

PRICES.

No. 1.	Cup Shape, with Stem, to be used with Porte-Polisher No. 307	$ .20
No. 1.	Cup Shape, without Stem, for Mandrels Nos. 300, 301	.20
No. 2.	Straight, with Stem, used with Porte-Polisher No. 307	.25
No. 2.	Straight, without Stem, for Mandrels Nos. 300, 301	.25
No. 4.	Cup Shape, To be used on Mandrel No. 303.	.25
No. 5.	Straight, To be used on Mandrel No. 303.	.25

Tooth-Polishing Brush.



The brush spreads out like a fan. It carries polishing powders under the free margins of the gums without injury. Four grades: Soft, Medium, Stiff and Extra Stiff. Used with Porte polisher 307.

Price, any one grade, or assorted.....each $ .03
Price, any one grade or assorted.....per doz. .30
Price, any one grade or assorted.....per gross 3.00

Leather Polishing Wheels.

Sometimes called Moosehide or Hard Buff polishers.
For carrying pumice and other powders to clean teeth or polish fillings.
Five diameters, varying in thickness.
Put up in boxes of 100 assorted or of separate diameters, as desired. Used on Mandrels Nos. 301, 301¼, 319B.

Price .....per box $ .40

Compressed Leather Wheels.

For Polishing Plates, Etc.

Price per box of 50, ½ inch diameter.....$ .20

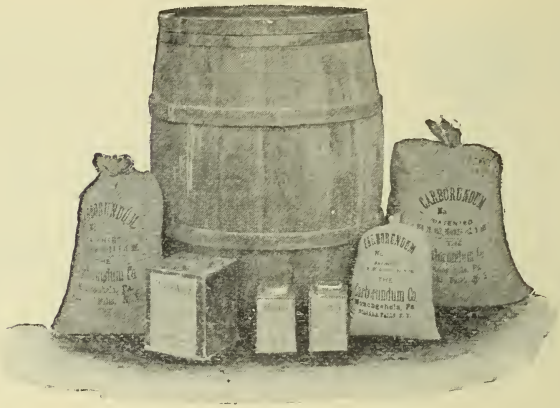
Chamois Polishing Wheels for Engine.

Three thicknesses of the chamois are stitched together in a circular form, making a sort of a hub. The wheels just adapt themselves perfectly to the surface to which they are applied, forming an ideal vehicle for the polishing material.

Two sizes: ⅝ in., ¾ in. Put up in boxes of 25, containing sixteen of the smaller and nine of the larger size.

Price .....per box $ .40; each $ .02
Felt buffs, assorted forms.....per doz. .50

Carborundum Powder.



Carborundum powder is the best known substance for polishing gold fillings. It is used just like other powders. We can furnish it in any grit, but for this purpose supply the six-minute grade. If it is used once it is used always. It is also invaluable for polishing instruments. It doesn't scratch. It polishes.

Price, per box.....$0.15

Ordinary Polishing Powders.

Arkansas Stone Powder	per box	$0.25
Buckhorn Powder, large boxes	"	.38
Chalk, Prepared	per lb., $0.12; "	10
Crocus	"	.10
Corundum Flour	"	.25
Corundum Flour, Extra Fine	"	.25
Emery	"	.10
Hindostan Stone	"	.12
Pumice Stone	per lb., $0.10; "	.10
Rotten Stone	"	.10
Rouge	"	.20
Tripoli	"	.10

Paper Disk Lubricator.

The Paper Disk Lubricator is used to eliminate the grating sound of the disk, and to lessen the heating of the filling during the polishing operation. It is in the form of a stick; the material is of about the consistence of yellow wax, and is used by holding one end against the rotating disk, the surface of which becomes coated with a film of the lubricator, and is then ready to be applied to the filling.

The effect is seen in a smoother cut, while in no way interfering with the rapidity of the work; it also, to an extent, stiffens the disk and lessens its liability to catch in the rubber-dam.

This Lubricator is an economy. The gold ground off by the disk is caught and held in the film, so that if the used disks are saved and burned the gold recovered will more than pay for the year's supply of disks.

Put up in tin foil, which is stripped off as the Lubricator is used, making it cleanly to handle.

Price.....$0.10

Carborundum Paper Disks.

THE same identical grade of Carborundum is used for charging these disks that is used in making the regular line of engine goods.

It is pure Carborundum and that is all there is to it. Carborundum on a disk cuts just as well on a paper disk as in a wheel.

If paper disks could be charged with diamond dust they couldn't cut any faster than these disks cut. The finer grits polish while they cut. They are good from start to finish

Specify the genuine Carborundum paper disks in next order. We will refund the price of the full box for the lid of any box that is not satisfactory. They are sold with a guarantee.

Four Grits:—

COARSE.
MEDIUM COARSE.
MEDIUM.
FINE.

Four Sizes:—

½ inch, ⅝ inch, ¾ inch, ⅞ inch.

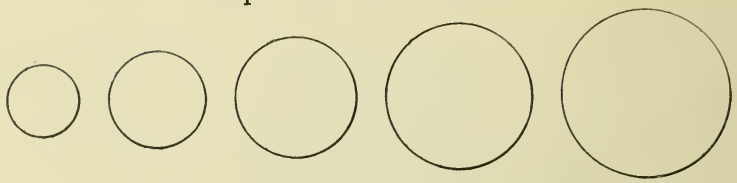
Boxed Separately.

They cost just the same as common disks.

Price per 100, ... 10 cents.
" 1200, ... $1.00

Lee S. Smith & Son, Makers, Pittsburg.

Paper & Cloth Disks.



⅜ ½ ⅝ ¾ ⅞

Our Disks are made of the very best material, they are heavily shellacked, and the edges are very clean cut, which makes them superior to any on the market.

Thy are made in Sand Paper, Garnet Paper, Emery Paper, Cuttlefish Paper, and Emery Cloth.

The grits run from oo fine to 1, very coarse, excepting the Cuttlefish Disks, which are made in three grits—fine, medium, and coarse.

They are made in the following sizes:

⅜ in. ½ in. ⅝ in. ¾ in. ⅞ in.

Paper and Cloth Disks are put up as follows:

In boxes containing 100 of one kind, size, and grit.

In boxes containing 525 assorted kinds, sizes, and grits.

PRICES.

Paper Disks, 100 in box.....$ .10
per 12 boxes..... 1.00
Emery Cloth Disks, 100 in box ..... .20
per 12 boxes..... 2.00

Paper and Cloth Disks, assorted, 525 in box..... ..... .60
In ordering state kind, size and grit wanted.

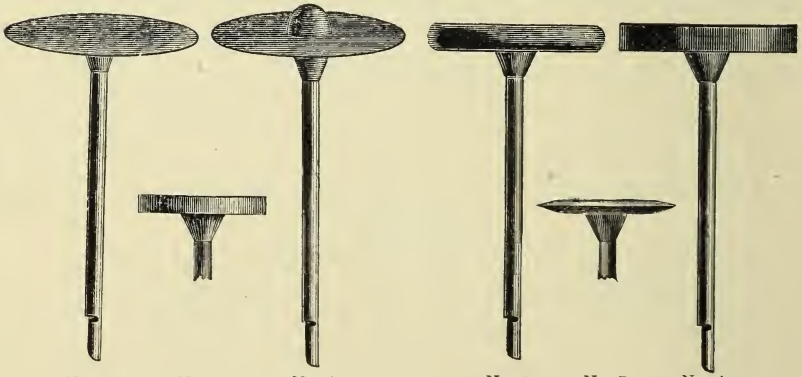
H. D. JUSTI & SON,

Philadelphia. Chicago.

Brown's Mounted Granite Disks.

For Use With Dental Engines.

The Buffalo Dental Mfg. Co. Sole Agent.

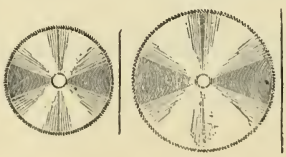


No. 1. No. 0. No. 2. No. 3. No. 7. No. 4.

Furnished in three grits—fine, medium, and coarse.

PRICE.

Nos. 0, 1, 2, 3, 4, 7, Brown's Mounted Granite Disks, each.....$0.12
Per dozen 1.25



Separating Saws.

For making separations between teeth, no more valuable appliance has been brought forward than these fine steel circular saws for dental engines.

PRICES.

⅛ inch $0.15
¾ inch ..... .20

Paper and Cloth Disks.

ORDINARY.

Sand-Paper. Six Sizes.	Garnet-Paper. Four Grits.	Three Grits.	Emery Paper. Four Grits.	French Emery-Paper. One Grit.	Cuttlefish-Paper. Two Grits.			Emery-Cloth. One Grit.
1/4-in.	00-0-1-1/2	00-0-1/2	00-0-1-1/2	Regular.	Regular	and	Fine.	0
3/8 "	00-0-1-1/2	00-0-1/2	00-0-1-1/2	"	"	"	"	0
1/2 "	00-0-1-1/2	00-0-1/2	00-0-1-1/2	"	"	"	"	0
5/8 "	00-0-1-1/2	00-0-1/2	00-0-1-1/2	"	"	"	"	0
3/4 "	00-0-1-1/2	00-0-1/2	00-0-1-1/2	"	"	"	"	0
7/8 "	00-0-1-1/2	00-0-1/2	00-0-1-1/2	"	"	"	"	0

PRICES.

Paper disks, 100 in a box, per box, $ .10; per dozen boxes $1.00
Emery cloth disks, 100 in a box, per box, $0.20; per dozen boxes 2.00

Perfection cloth disks, Garnet, coarse cutting; Lava, fine cutting; Rouge, polishing. One size, 3/4 inch.

Price per box, $ .20; per dozen boxes $2.00
Double-Faced French Emery paper Disks—per box ..... .15

Easel for Paper Disks.

This easel is made of wood 7 1/4 inches long by 4 3/4 inches wide. It carries an assortment of 525 disks. It stands up on the bracket table, where every disk on it is in plain sight.

Price, with 525 assorted disks ..... $ .90

Disk Tray.

This tray has 14 separate compartments. It contains 1,400 paper disks. There is a separate compartment for each kind. The tray measures 5 inches in diameter and is 1 3/8 inches deep. It is the cheapest and best way to buy paper disks.

Price $1.30

Thickened Rim Sand Paper Disks.

The rim of the disks is thick and is the only part charged. Two sizes, 5/8 and 7/8 inch. Two grits, 00 fine, and 1 coarse.

Price per box of 400 ..... $1.00

Chamois Disks.

A hard, smooth celluloid surface on one side, chamois on the other. Made in four sizes, 1/2, 5/8, 3/4 and 7/8 inch.

Price per box of 25 disks ..... $ .25

Celluloid Disks.

The abrasive material (Corundum) is forced into the Celluloid instead of being merely carried upon the surface. Their flexibility prevents their being easily broken.

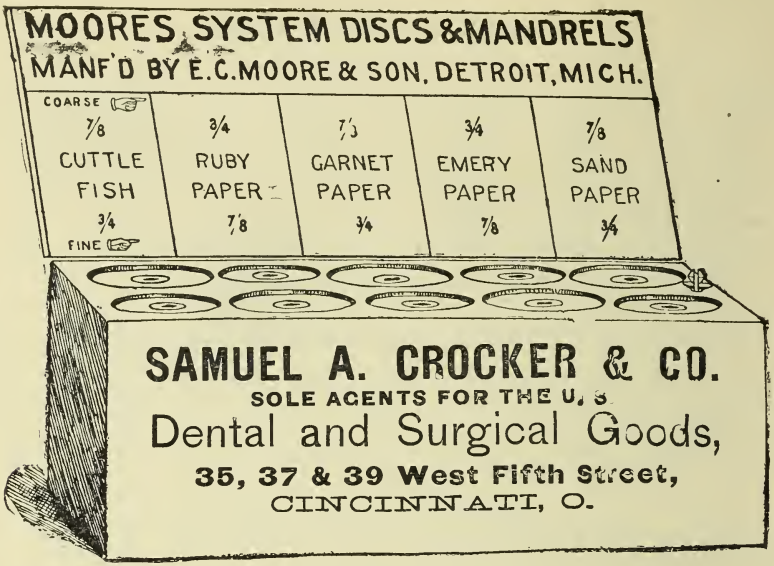
Made of four diameters, viz.: 7/8-in., 3/4-in., 5/8-in., 1/2-in. Put up in boxes containing one dozen of a size, not assorted.

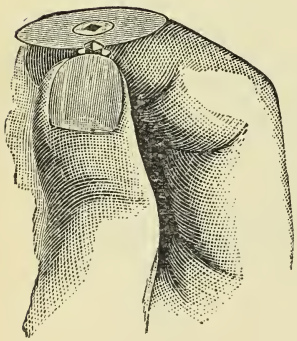
Price ..... each $ .03
Price ..... per doz. .25

Plain White Celluloid Disks.

For cutting and finishing after the dam is removed they are far superior to paper, as saliva has no effect upon them. Dip the disk in water, and apply any of the polishing or cutting powders.

Price per box of 100 ..... $ .40
Washers for engine disks, per box of 100 ..... .20


MOORES SYSTEM DISCS & MANDRELS
MANF'D BY E.C.MOORE & SON, DETROIT, MICH.
COARSE
⅞ CUTTLE FISH ¾ FINE
¾ RUBY PAPER ⅞
⅞ GARNET PAPER ¾
¾ EMERY PAPER ⅞
⅞ SAND PAPER ½
SAMUEL A. CROCKER & CO.
SOLE AGENTS FOR THE U. S
Dental and Surgical Goods,
35, 37 & 39 West Fifth Street,
CINCINNATI, O.



As shown in the illustration, the efficiency of both the disc and mandrel, owing to their mechanical construction, is so apparent and satisfying, that special instruction is scarcely necessary. It is comforting to know that the mandrel is but one piece, no screws or nuts to drop or lose on the floor; it can be turned backward as well as forward without fear of disc coming off. The illustration shows the construction of mandrel, which is simply a split mandrel having a square grooved beveled head, and the disc, which is supplied with square metallic center, is put on and held tightly to place on the mandrel by pressing smartly into the square center of disc until it goes on with a snap, and to remove, take mandrel between the thumb and finger in such manner as to tendto close the spring of the mandrel, insert the thumb nail between the flange of the mandrel and the flange of the disc, forcing the nail between, throws the disc off; a very little practice and this is easily done.

The Discs are put up in five (5) Grits as shown on label above, and are made in four (4) sizes, ½, ⅝, ¾, ⅞. These are put up in round boxes of 50 Discs each, and in neat blocks with hinged lid (as shown in cut) of 500 Discs each. These blocks are made in three (3) sizes, holding respectively ½ and ⅝, ⅝ and ¾, ¾ and ⅞ sizes.

The Discs are made of two (2) Grits, fine and coarse. They are pronounced by the best operators as the greatest time-savers and the best Discs ever offered the profession.

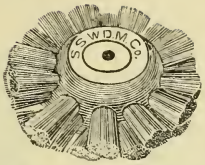
PRICES.

Mandrels (Universal)	$1.00
Mandrels, Cone Journal	1.00
Discs in stained wooden blocks of 500	1.50
Discs, in single round boxes of 50	.15

Samuel A. Crocker & Co., Sole Agents, Cincinnati, Ohio.

Steel Wire Wheel Brushes.

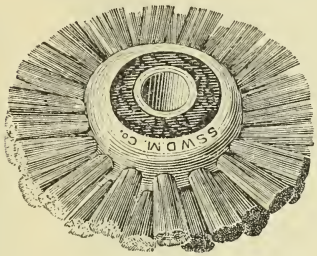
For Cleaning Burs and Files.



No. 1, 1 in. diameter.

To be used on Mandrels Nos. 300, 301.

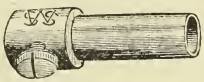
Price..... $0.40



No. 2. 1⅝ in. diam.

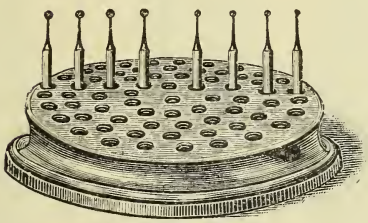
Price.....$0.50

Chuck for Carrying Wheel Brush No. 2.

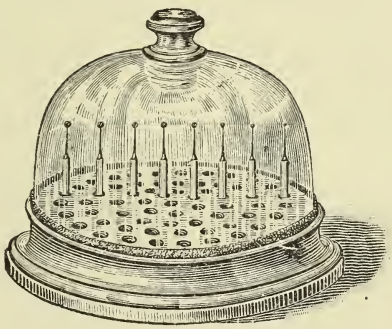


Price..... $0.25

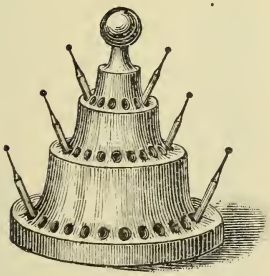
Stands for Engine Bits.



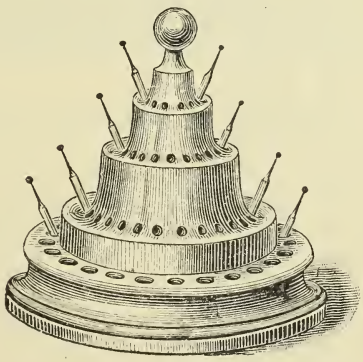
1



2



3



4

The cuts illustrate five varieties of Stands for the convenient keeping of Engine-bits. They are of polished or ebonized wood.

The same forms are made for Right-Angle Burs.

No. 1 is 5 inches in diameter, 1 inch high, containing 72 holes.
No. 2, same, with glass cover, but containing only 60 holes.
No. 3 is 3¼ inches in diameter, 3½ inches high, containing 48 holes.
No. 4 is 4¾ inches in diameter, 4½ inches high, containing 78 holes.
No. 5 is a Revolving Stand, 7 inches in diameter, 7½ inches high, containing 120 holes.

PRICES.

No. 1	$1.00
No. 2	1.50
No. 3	1.00
No. 4	1.50
No. 5	3.00

MINERAL ENGINE OIL.

There's nothing fancy about this oil.

It is simply a plain, colorless, tasteless, odorless oil that will not gum, and will not become rancid. It prevents heating of journals. It is made for use on engines and Hand-pieces. It is the only oil that ought to be used on delicate machinery.

The price at which mineral engine oil is sold is the same as inferior oils. The bottle contains full two ounces, which is double the size usually sold.

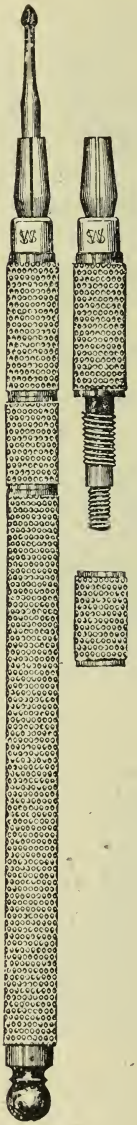
See that the name of the refiners, LEE S. SMITH & SON, is on the label.

Price, per 2 oz. bottle, - - $0.25

LEE S. SMITH & SON,

Refiners, - - - - - Pittsburg.

Engine Bit-Holders.



Kaeber Engine Bit Holder.

A slit coned clamp, working in a cone-socket and controlled by a screw collar, grasps the bit firmly. Made for straight and cone-journal bits.

State which is wanted.

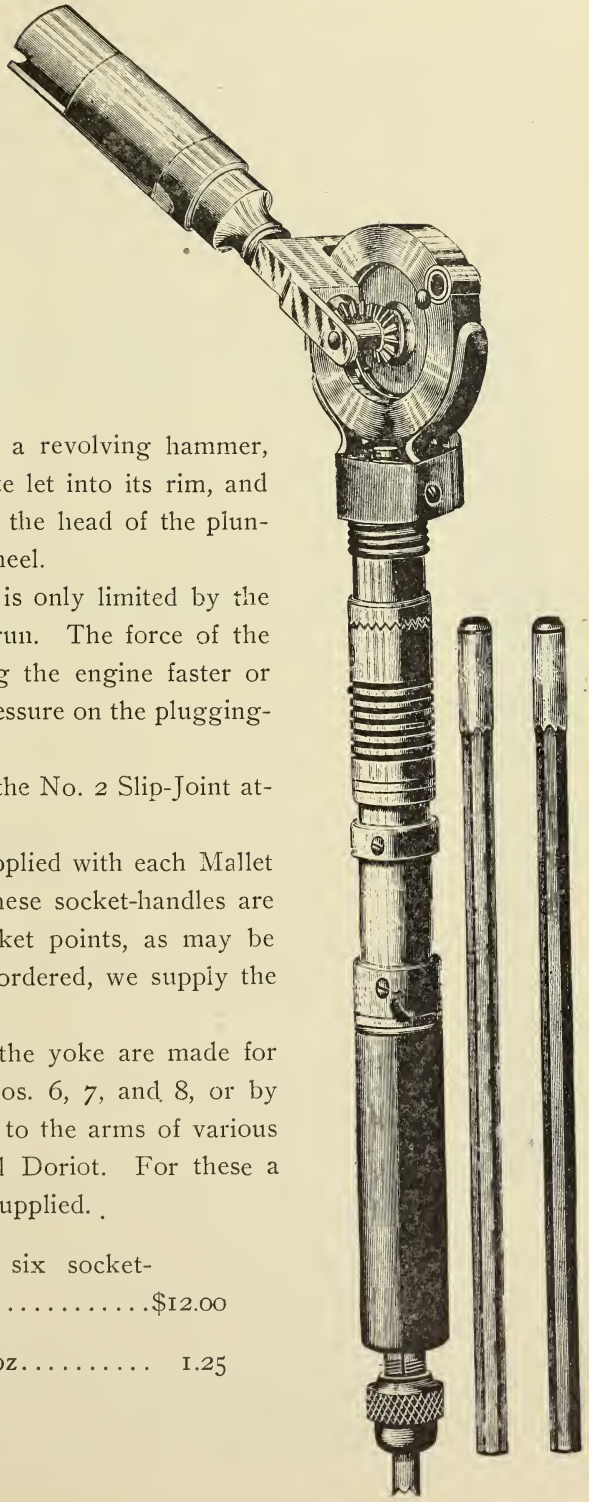
Price, - - - $1.25

Improved Revolving Head Engine Bit-Holder.

A chuck device holds the bit firmly. Two styles, one to hold bits for No. 4 Hand-piece and other straight-shank bits; the other to hold those for No. 6. In ordering, state which is wanted.

Price, - $0.75

ENGINE MALLET NUMBER 3.



The blow is delivered by a revolving hammer, a metal wheel with a steel plate let into its rim, and projecting sufficiently to strike the head of the plunger at each revolution of the wheel.

The rapidity of the blows is only limited by the speed at which the engine is run. The force of the blow can be varied by running the engine faster or slower, or by greater or less pressure on the plugging-point.

The Mallet is shown with the No. 2 Slip-Joint attached.

Six socket-handles are supplied with each Mallet and included in the price. These socket-handles are for automatic or for cone-socket points, as may be preferred. Unless otherwise ordered, we supply the former.

Various modifications of the yoke are made for attachment to Hand-pieces Nos. 6, 7, and 8, or by means of the Slip-Joint direct to the arms of various engines, except the Cord and Doriot. For these a still different organization is supplied.

Price, any fitting, with six socket-handles complete $12.00

Sockets separately, per doz..... 1.25

Engine Mallet No. 4.

As will appear from the illustration, this new form of Engine Mallet is extremely compact and simple. We think it will be found to answer the requirements of a great many in the profession who wish to use an Engine Mallet, but who insist that it shall be small in size.

The rapidity of the blow is of course regulated by the speed of the engine. Every revolution of the hand-piece spindle gives a distinct blow. The blow approximates that of the Electric Mallet; its strength is regulated by the small collar bearing the two knurled rings at *b*.

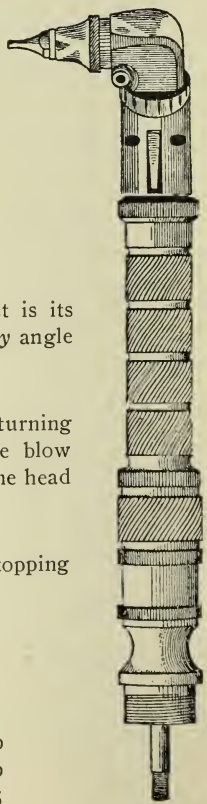
The small serrated finger slide, *c*, is intended to enable the operator to arrest the blow while the engine is running, particularly to allow him to stop the action of the hammer while he is picking up gold and carrying it to its place in the mouth.

Supplied with fittings for No. 4, No. 6, Nos. 7 and 8, or Doriot Hand-piece A, and for the No. 2 Slip-Joint. Be sure to specify in ordering which fitting is wanted.

PRICES.

With Fittings for No. 4, No. 6, Nos. 7 and 8 Hand-pieces, or No. 2 Slip-Joint.....$ 8.00
With Fittings for Doriot Hand-piece A..... 10.00

The Avil Dental Mallet.



The most important feature of this Engine Mallet is its swiveling or adjustable head, which can be placed at *any* angle and impart a *direct blow.*

A heavy or light blow can be obtained by simply turning an adjustable collar. By merely pressing a lever, the blow is stopped to pick up gold. To change the angle, twist the head and it locks itself.

All these changes can be accomplished without stopping the engine.

PRICES.

Avil Mallet, adapted for Slip Joint, including one point $15.00
Dog and Ferrule extra..... 1.50
Plugger Points ....each .75

The Buffalo Dental Manufacturing Co.

desire to call attention to the Lewis and S. & L. Automatic Pluggers as now manufactured. Never before in its history have so many improvements been made in these instruments as have been made since 1891. It has been the aim of the Company to excel in their productions, and these instruments are examples of excellence seldom obtained. This is particularly due to the introduction of modern machinery and methods, and the Automatic Pluggers as now made are as perfect as ingenuity, experience, careful supervision and machinery can make them.

The Company would also state that all Automatic Pluggers are made under the personal supervision of their original inventor; the first Automatic Plugger, afterwards known as the "Snow & Lewis," having been invented, made and used by Dr. Theo. G. Lewis, the President of the Company, who has been closely identified with the manufacture and improvements ever since its introduction.

The original instrument was first publicly exhibited by Dr. Lewis at the meeting of the Buffalo City Dental Association, held September 4, 1865; also, in October of the same year, at the meeting of the Western New York Dental Society, and a record of this exhibit, with proper credit, was given to Dr. Lewis at the time in the Secretary's books of both Societies. Subsequently, Snow & Lewis commenced the manufacture of the instrument, but were succeeded shortly after by the Buffalo Dental Manufacturing Co., who have been its exclusive manufacturers ever since.

Six Styles. For thirty-three years the best known and most indispensable adjunct to the Dentists' operating case.

No. 7. Lewis Direct-Action Automatic Plugger. Adjustable by milled sleeve to either one-eighth or one-sixteenth inch stroke. Pat. May 16, 1899. Price, nickel plated, $7.00.

No. 1. Direct-Action Automatic Plugger. Adjustable to either one-eighth or one-quarter inch stroke. Price, nickel plated, $7.00.

No. 2. Direct-Action Automatic Plugger, having but one-eighth inch stroke. Price, nickel-plated, $7.00.

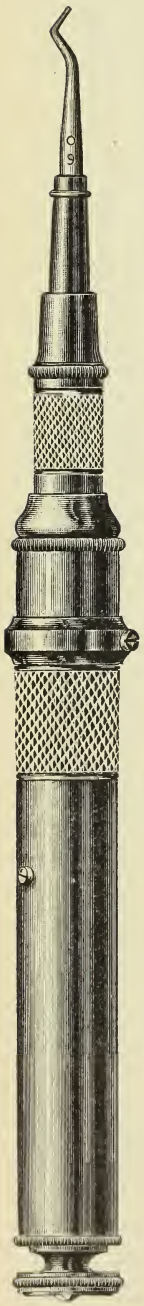
No. 3. Double-Action Automatic Plugger. One-eighth inch stroke. The most perfect "Double-Action" made. Price, nickel plated, $8.00.

No. 4. Direct-Action Plugger. The same mechanism as No. 3, but without the "Back-Action" end. Regulation of blow same as No. 3. Price, nickel plated, $7.00.

No. 6. Obtuse-Angle Automatic Plugger. Pat. March 28, 1893; July 2, 1895. Same mechanism as No. 4, but with improved tension knob, and Obtuse Angle tool or point holder. Price, nickel plated, $8.00.

The Lewis Automatic Plugger, No. 7.

Made only by the Buffalo Dental Manufacturing Company.



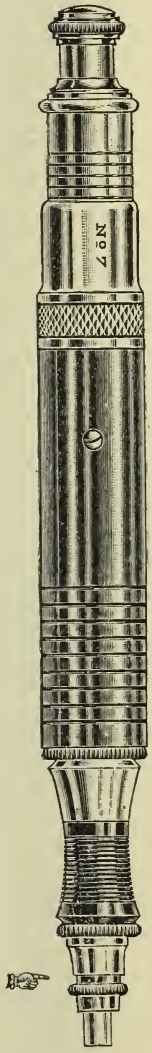
No. 1.

This instrument is a modification of the well-known Automatic Pluggers made by us for so many years, but has improvements in design and construction, and a device for obtaining either a long or short blow, that is in no other Automatic Plugger heretofore constructed.

The hammer is rubber-faced to deaden the blow, and is nearly the same in weight as used in the No. 1 Automatic Plugger. The catches for engaging the latch are milled on one piece of steel and hardened. The catch-plate is inserted in the hammer in such a manner that it is impossible for it to become loose or break.

The most marked improvement aside from the design of the case, is in the simple and positive device by which a very short stroke—or receding of the shank—is secured, and a corresponding light or delicate blow obtained. This change from a long or ⅛ to a 1-16 inch stroke, or *vice versa,* is accomplished by revolving the knurled steel sleeve on the *extreme lower end* of the instrument to a STOP either *out* or *in.* The short stroke—evolving a light blow—is very desirable when operating on fragile walls.

Price, Lewis Automatic Plugger, No. 7, Nickel plated.$7 00



Patented May 16, 1899

No. 7.

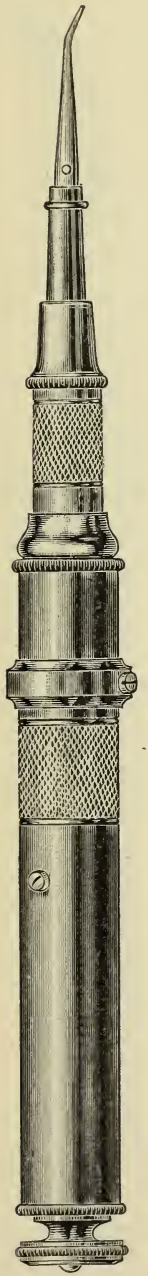
The S. & L. Automatic Plugger, No. 1.

The Snow & Lewis Automatic Plugger has been in use since 1865, and it stands as well in favor at present as it has at any time since its introduction. It was the first successful Spring Plugger brought to public notice, and nothing has been offered in the market since its first appearance which compares with it for efficiency. The best proof of its excellence, and the public appreciation of it, is found in the constantly increasing demand for it.

Full directions accompany each Plugger sold.

S. & L. Automatic Plugger, No. 1.....$7.00

The S. & L. Automatic Plugger, No. 2.



No. 2.

The No. 2 Automatic Plugger differs from the No. 1 by being a trifle shorter, and the shank or tool-holder having only one length of stroke instead of two; the shank receding but one-eighth of an inch. In all other respects the instrument is the same.

This instrument (No. 2) is preferred by many operators who never find use for the long or one-fourth inch stroke of the No. 1.

The No. 2 Automatic Plugger has a locking ring by which the tool-holder is made stationary, enabling the instrument to be used as a hand-plugger.

This Automatic Plugger has the socket fitted to receive either the S. & L. or cone socket points.

PRICE.

S. & L. Automatic Plugger No. 2, nickel plated $7.00

The S. & L. Automatic Plugger, No. 3.

The mechanism of this plugger is exactly the same as the other S. & L. Pluggers. The difference in the working is that this instrument gives the backward, or pull, blow, as well as the ordinary direct, or thrust, blow.

The Double-Action Plugger will be found very convenient for use when a hand instrument is required to fix the gold before malleting; the back-action end holding the hand-plugger point and serving the purpose of a hand instrument, while it is only necessary to reverse the plugger in the hand to do the malleting.

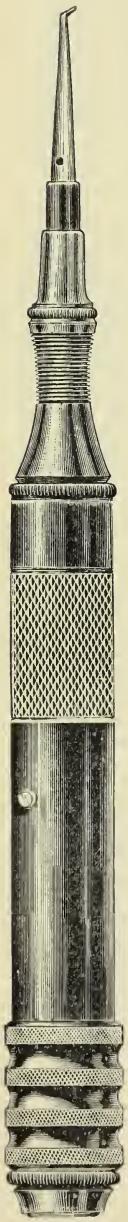
See illustrations of back action points on Page 196.

PRICE.

S. & L. Double-Action Automatic Plugger No. 3, nickel plated.....$8.00

No. 3.

The S. & L. Automatic Plugger No. 4.



No. 4.

The immediate success of the S. & L. Double-Action Automatic Plugger suggested the adoption of the same mechanism for a direct-action plugger. The outward form of the instrument has been changed to better accommodate the fingers. The size of the case remains the same, as over thirty years' experience has demonstrated that a plugger with a small case and a small hammer, actuated by a stiff spring, gives a short, jerky, undesirable blow, while one with a large case, containing a large hammer, propelled by an elastic spring, delivers a blow nearly resembling that of a hand-mallet.

The shank or tool holder in the No. 4 extends through the entire length of the instrument, the upper or top end of the shank being supported by the milled cap. This not only gives a steadiness to the tool-holder, but ensures all the parts being in line, in any position the instrument may be placed.

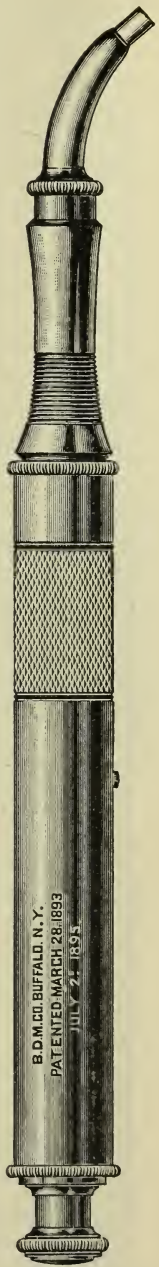
PRICE.

S. &. L. Automatic Plugger No. 4, nickel plated $7.00

The S. & L. Automatic Plugger No. 6.

OBTUSE ANGLE.

Patented March 28, 1893. July 2, 1895.



No. 6.

A new form of the S. & L. Automatic Plugger, whereby a direct blow may be given in a curved direction. This improvement renders the instrument capable of reaching all posterior cavities with a facility and certainty impossible with the direct-acting or straight-shank pluggers. The usefulness of this addition is not limited to the filling of posterior or obscure cavities, but it will be found equally convenient in many other situations.

The points used with the No. 6 Automatic Plugger are special, and are curved to correspond with the curve of the tool or point-holder, thereby bringing all parts in line with the blow. These points are also of special taper, and are accurately fitted to the tool-holder. No points except those made by the Buffalo Dental Manufacturing Company will fit the No. 6 Automatic Plugger.

For illustrations of points used with the No. 6 Automatic Plugger, see page 197.

PRICE.

S. & L. Automatic Plugger No. 6, nickel plated $8.00

Ivory's Automatic Pluggers.

(PATENTED JUNE 22d, 1897.)

Other Patents Pending for Additional Improvements.

The Single Action Plugger and the Double Action Plugger are actuated by the same mechanical movements.

The Castings are of Black, Hard Rubber.
They are light and pleasant to handle.
Do not cramp the hand.
Each blow made is decisive.
The pressure for ordinary stroke easy.
The distance $\frac{3}{32}$ of an inch.
The stroke is speedy and not annoying.
Their durability guaranteed.

INSTRUCTIONS.

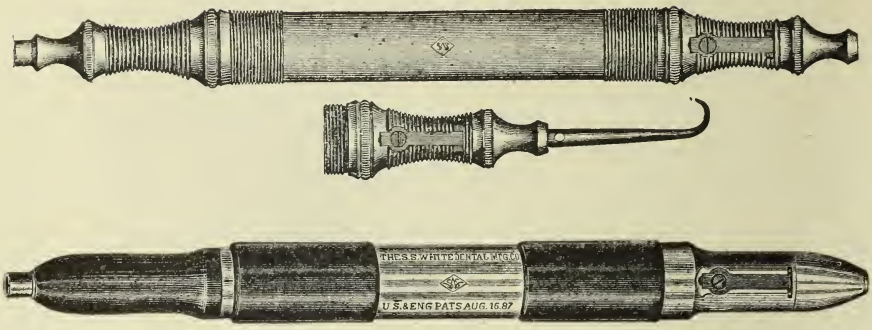
To make the blow heavy or light, turn the cap B on Single Action ; and the movable stem on the Double Action.

The shaft is of one solid length, to which the springs are attached and on which the hammer works, making a simple and durable instrument. Are tapped to fit either Cone Socket or Automatic Points.

PRICES.

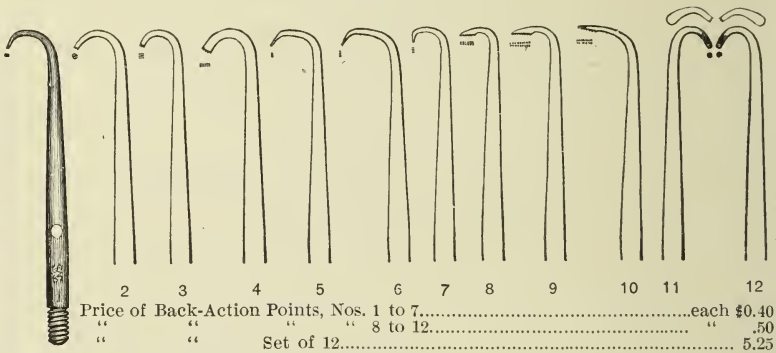
Double action	$7 00
Single action	6 00

The Abbott Automatic Mallet.



Engravings are ¾ size.

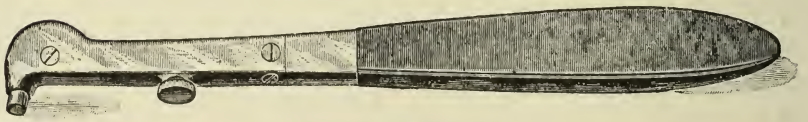
A is the old style Abbott.
B is the same form with shortened stroke.
C is the long stroke with rubber handle.
D is the same with short stroke.
Price, any style, $8.00.



Price of Back-Action Points, Nos. 1 to 7.....each $0.40
" " " " 8 to 12..... " .50
" " Set of 12..... 5.25

The Bosworth Automatic Mallet.

Direct-Action Mallet.

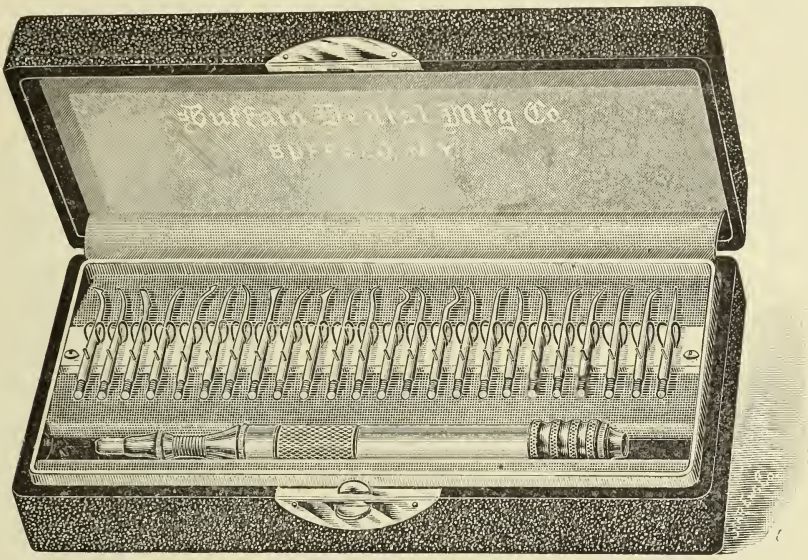


Angle Mallet.

PRICES.

Direct-Action Mallet	$ 7.00
" " " with Case	10.00
Angle Mallet with Case and Twelve Points	16.00
" " with Points (less Case)	13.00
" " separately	10.00
Angle Points, separately (per set)	3.00
" " Nos. 1, 2, 10, 11 and 12, each	.15
" " " 6, 7, "	.25
" " " 8, 9, "	.30
" " " 5, "	.35
" " " 3, 4, "	.50
Case only	3.00

Morocco Case for Automatic Pluggers.



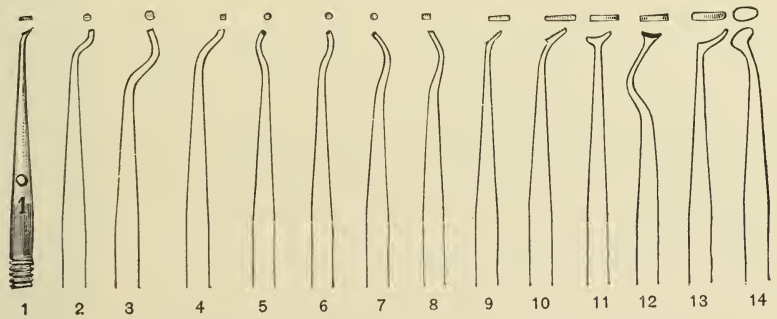
NEW PATTERN POINT RACK.

PRICES.

Morocco Case, with rack to hold 24 points..... $ 3.00
Morocco Case and 24 Plugger Points, with a Lewis No. 7 or S. & L., No. 1, 2 or 4 Automatic Plugger 17.00
Morocco Case, set Back-Action Points, and one dozen assorted Direct-Action Points, with No. 3 Automatic Plugger 19.75

Points for the Lewis and S. L. Automatic Pluggers.

SET "L."



PRICES SET "L" AUTOMATIC PLUGGER POINTS.

Nos. 1, 2, 3, 5, 6, 7, 13, 14..... each, $ .50
Nos. 4, 8, 9, 10, 11, 12..... each, .75
Per set of 14..... 8.50
S. & L. or Abbott Automatic Plugger Points, per doz..... 3.50

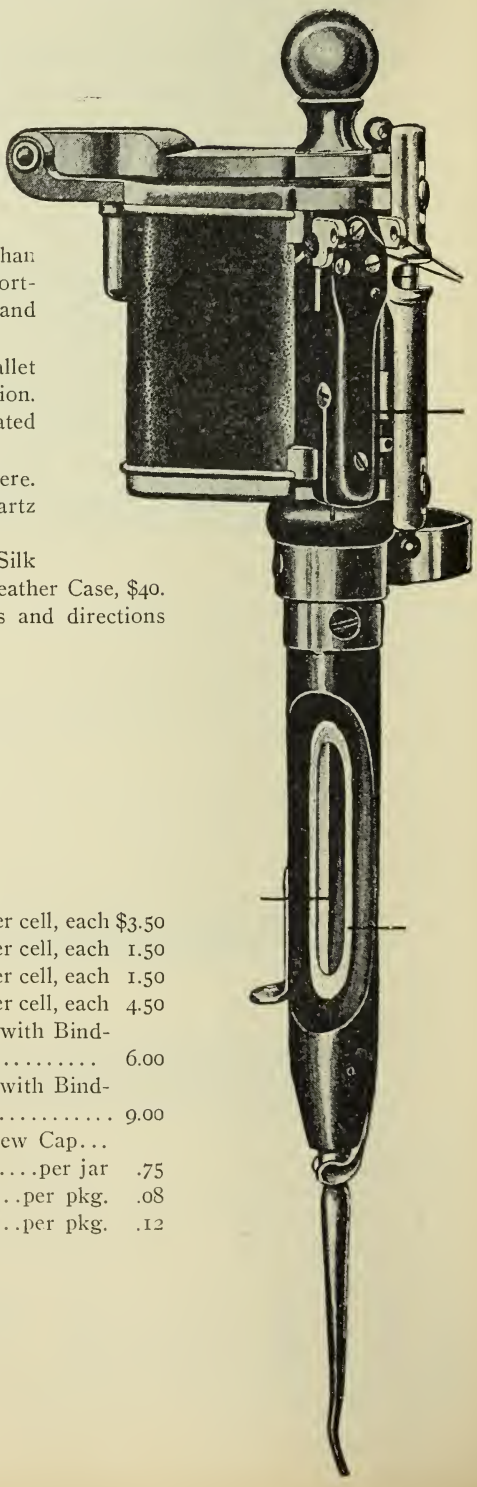
Points for Obtuse Angle Automatic Plugger No. 6.

PRICES.

Obtuse Angle Points, per set of 8..... $2.00
Obtuse Angle Points, each..... .25

Points of any desired pattern made to order.

The New Improved S. S. White Dental Electrical Mallet.



This mallet is really an improved mallet. It is the same general form as the original Bonwill Mallet, but the only feature in it that has not been changed is the winding of the magnets. The mallet as now made is interchangeable.

An electrical mallet is an ideal instrument. It strikes more blows in a given time than any other form of mallet. The method of shortening or lengthening the stroke is simple and exact.

The mechanical portion of the improved mallet is completely insulated from the electrical portion. It is impossible for the current to be communicated to the hand of the operator or to the patient.

The Mallet requires 6 to 8 volts and ⅜ ampere. Can be used with direct street current, or Partz Acid Gravity Battery.

Price, Mallet with Connecting Posts, 7 ft. Silk Cord with Contacts, 1 Plugger, Wrench, and Leather Case, $40.

Complete detailed description, with prices and directions for use, sent to any dentist on application.

Partz Batteries.

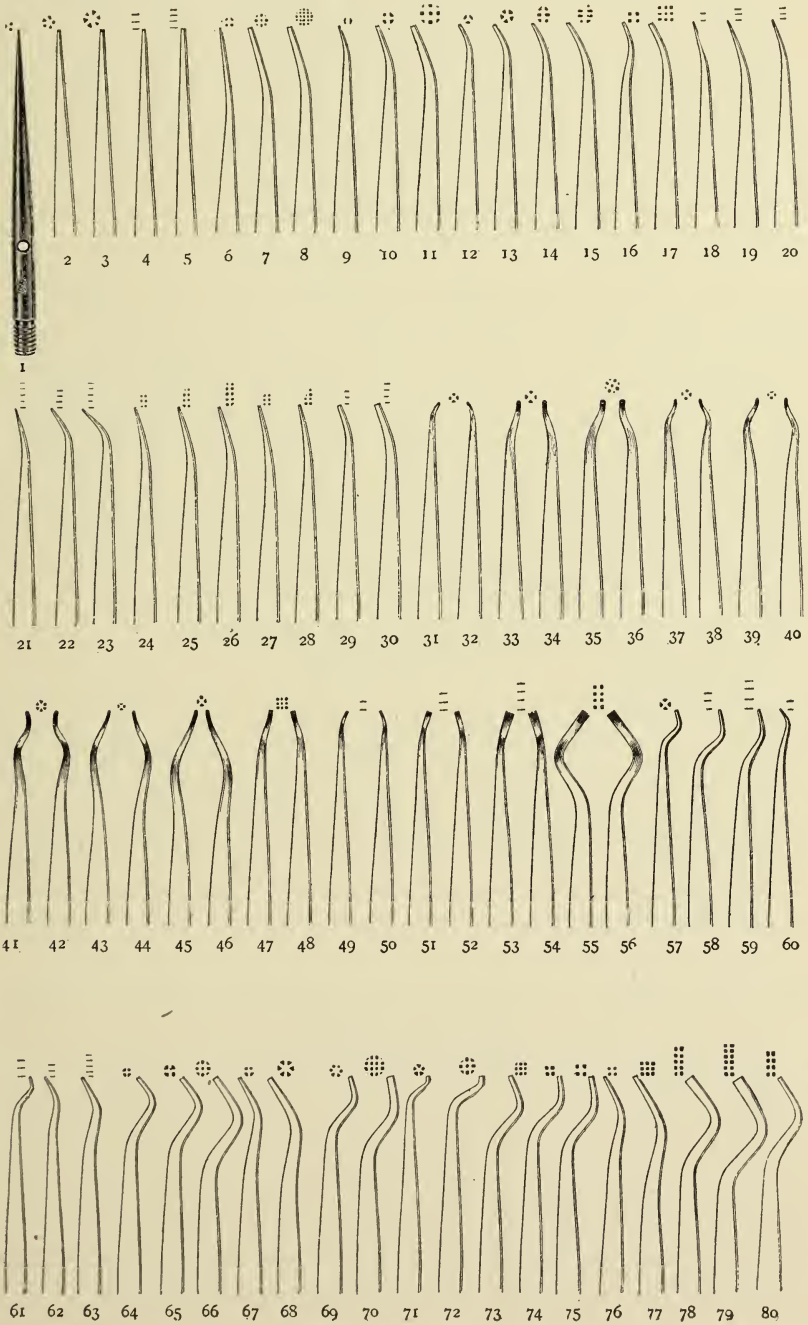
Acid Gravity No. 1 for Electrical Mallet....per cell, each	$3.50
Acid Gravity No. 3 .....per cell, each	1.50
Acid Battery, No. 4.....per cell, each	1.50
Motor Battery, No. 6.....per cell, each	4.50
Black Walnut Box for 4 Cells, No. 1 Battery, with Binding Posts	6.00
Black Walnut Box for 6 Cells, No. 1 Battery, with Binding Posts	9.00
Sulfo-Chromic Salt, 2 pounds in Jar with Screw Cap... .....per jar	.75
Sulfate of Magnesia, 11-oz. packages.....per pkg.	.08
Sulfate of Magnesia, 22-oz. packages.....per pkg.	.12

Set of 120 Plugger Points for Engine and Automatic Mallets.

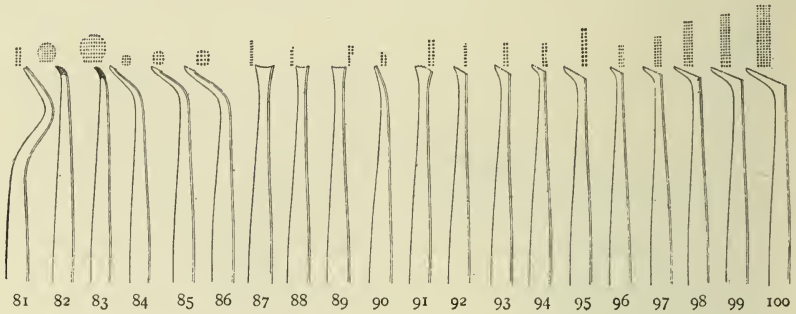
We have discarded old forms of engine pluggers formerly classified as "Selection A," "Selection B," etc., and have substituted this list of 120 points. The list has been selected with great care, and is carefully classified.

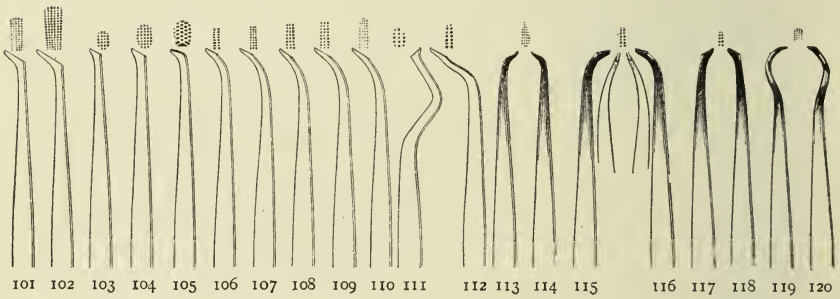
PRICES.

Nos. 1 to 46, 49 to 81, 87 to 93, 117 and 118—each, 35c. Nos. 84 to 86, 98 to 102, 107 to 110, 112 to 114, 119 & 120, each, 60c.
" 47 & 48, 94 to 97, 103 to 106, 111, 115 & 116 " 45c. " 82 and 83..... " 85c.



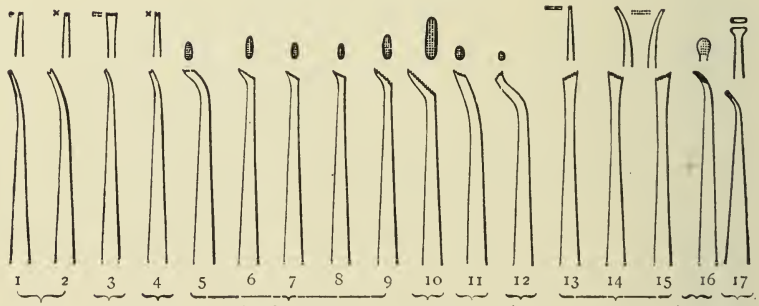
Plugger Points for Engine and Automatic Mallets.—Continued.



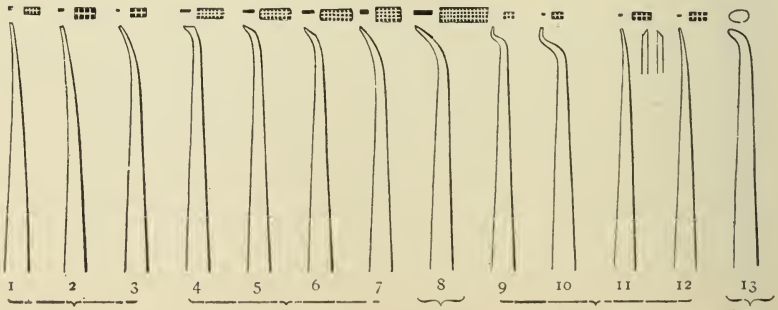


For prices of above points see preceding page.

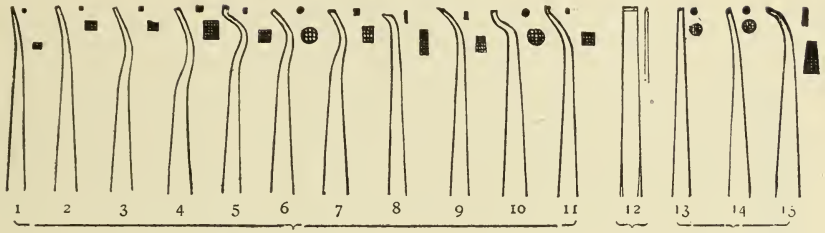
Dr. C. R. BUTLER'S.



Dr. R. W. VARNEY'S.

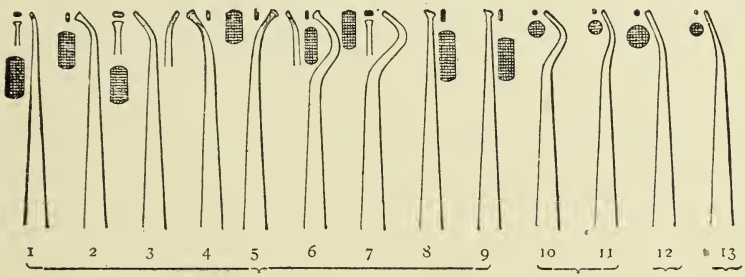


DR. M. H. WEBB'S.



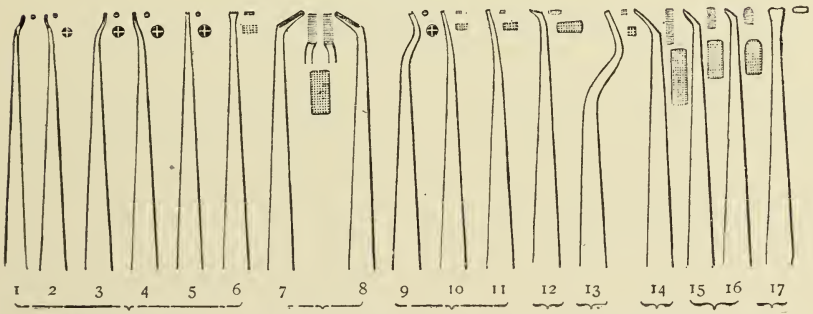
$1.00 each. 35c. $1.00 each.

DR. S. E. KNOWLES'S "CLUB FOOT."



$1.00 each. $0.75 each. $1.00 75c.

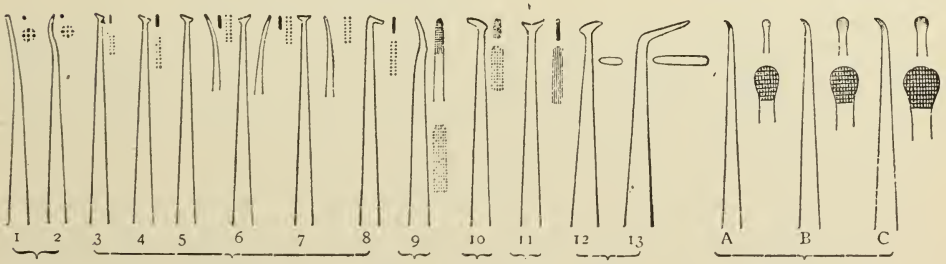
DR. J. A. WATLING'S REVISED SET.



$0.50 each. $1.50 each. $0.50 each. 75c. 50c. $1.50 $1.00 35c.

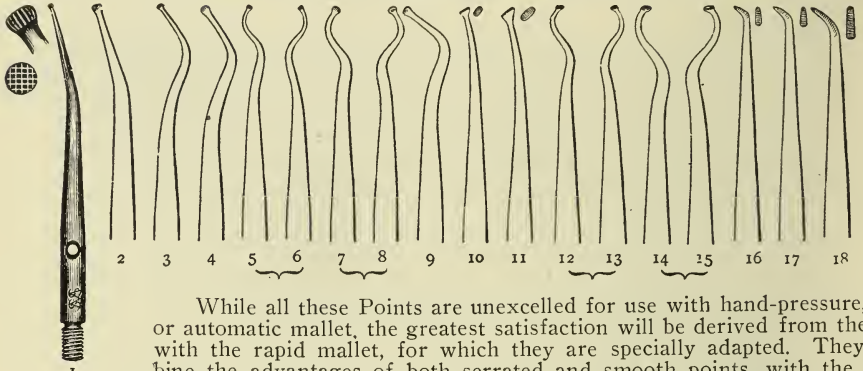
DR. M. H. CHAPPELL'S.

DR. T. L. NICKLIN'S.



75c. $1.25 each. $1.50 $1.75 $1.50 35c $1.25 each.

The Revised Set of Royce Plugger Points.



While all these Points are unexcelled for use with hand-pressure, hand or automatic mallet, the greatest satisfaction will be derived from their use with the rapid mallet, for which they are specially adapted. They combine the advantages of both serrated and smooth points, with the objectionable features of both eliminated. The ease and perfection with which gold can be manipulated with them when operated by the Engine Mallet is almost beyond belief. They are so shaped and serrated as to allow the utmost freedom of movement of the point in wiping in the gold, and the extension of the serrations over the sides of the heads facilitates their "clearing" without dragging. There are no corners or sharp edges to catch the gold or dent the filling, and they cannot burnish the surface of the gold so that the next piece will not cohere.

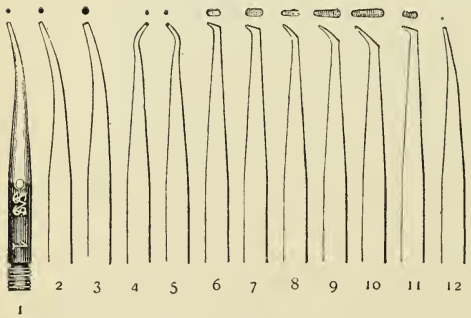
These points are also kept in stock for cone-socket handles.

PRICES.

Nos. 1 to 10, 12 to 15	each	$ .75
Nos. 16 and 17	each	1.00
Nos. 11 and 18	each	1.25
Set of 18		15.00

Bennett's Plugger Points.

1⅜ Inches Long.



The faces of these Plugger-points are slightly convex to insure perfect condensation and welding of the gold. The shanks are shorter than those of ordinary points, balancing the mallet in the hand more perfectly.

Nos. 1 to 5 are for starting and for filling labial and crown cavities. These are old forms, but serrated in one direction only to spread the gold slightly toward the walls. Nos. 6 and 7 are for packing gold against the cervical walls of medium and large cavities, and for building on corners or restoring crowns. Nos. 8, 9, and 10 are especially for use in the front teeth.. Nos. 8 and 9 have two surfaces, the smaller chiefly for working within the cavity, and the larger for completing the filling. No. 10 is also used for the latter purpose where a larger point is required. No. 11 is for medium and large approximal cavities in bicuspids and molars, the narrow end being intended for use in the grooves on the buccal and palatal walls. No. 12 is a special point for condensing around the walls and margins. It is flat, but has no corners or sharp edges. Though primarily intended for the automatic mallet, these points are equally well adapted for the hand mallet.

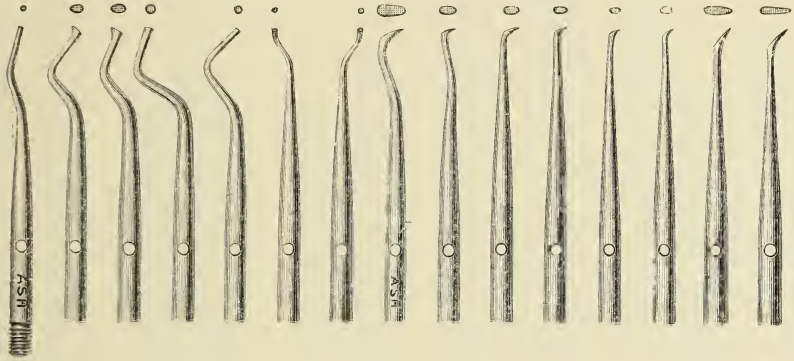
PRICES.

Nos. 1, 2, 3, 4, 5, 12	each	$ .35
Nos. 6, 7	each	.75
Nos. 8, 11	each	1.00
Nos. 9, 10	each	1.25
Per set of 12		8.00

Mallet Points.

With Convex Stoned Faces.

(Dr. Prosper Ladmore's.)
Made by C. Ash & Sons, Limited.



1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15.

These Pluggers are very finely serrated, and carefully made to patterns approved by Dr. Prosper Ladmore, and it gives us much pleasure to state that he says of their manufacture:

"THEY ARE PERFECT AND WITHOUT FAULT."

Much praise has been bestowed upon them by those Operators who have seen and used them.

Dr. Ladmore thus describes them:—

"Fig. 1. For retaining points and all fine work.

"Fig. 2 & 5. For lower cavities at the back of the mouth.

"Fig. 3 & 4. For upper cavities at the back of the mouth.

"Fig. 6 & 7. Fine corkscrew twists for interstitial cavities.

"Fig. 8. Foot Plugger, with large flat surface for condensing approximal fillings. This instrument is thinner than usual, to permit its use where there is only a slight space.

"Fig. 9 to 13. Foot Pluggers of different sizes, the convexed surfaces of which will be found to adapt themselves more readily to the cervical margins than ordinary flat-faced points would do; also they get over the work quicker, and counteract the tendency of the gold to 'ball up,' driving it toward the cavity walls.

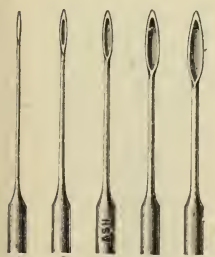
"Fig. 14 & 15. Are Foot Pluggers of an obtuse angle, for condensing interstitial fillings. These are also serrated at the points, thus enabling the Operator to use them on the foot surface or at the point, to save time in changing instruments."

PRICES.

Ladmore's Convex Stoned Pluggers, with screw ends, like Fig. 1, for Engine, Automatic and Cone Sockets.....(Figs. 1-15) each $ .50

Nerve Canal Drills.

(Dr. W. Mitchell's.)
Made by C. Ash & Sons, Limited.



1. 2. 3. 4. 5.

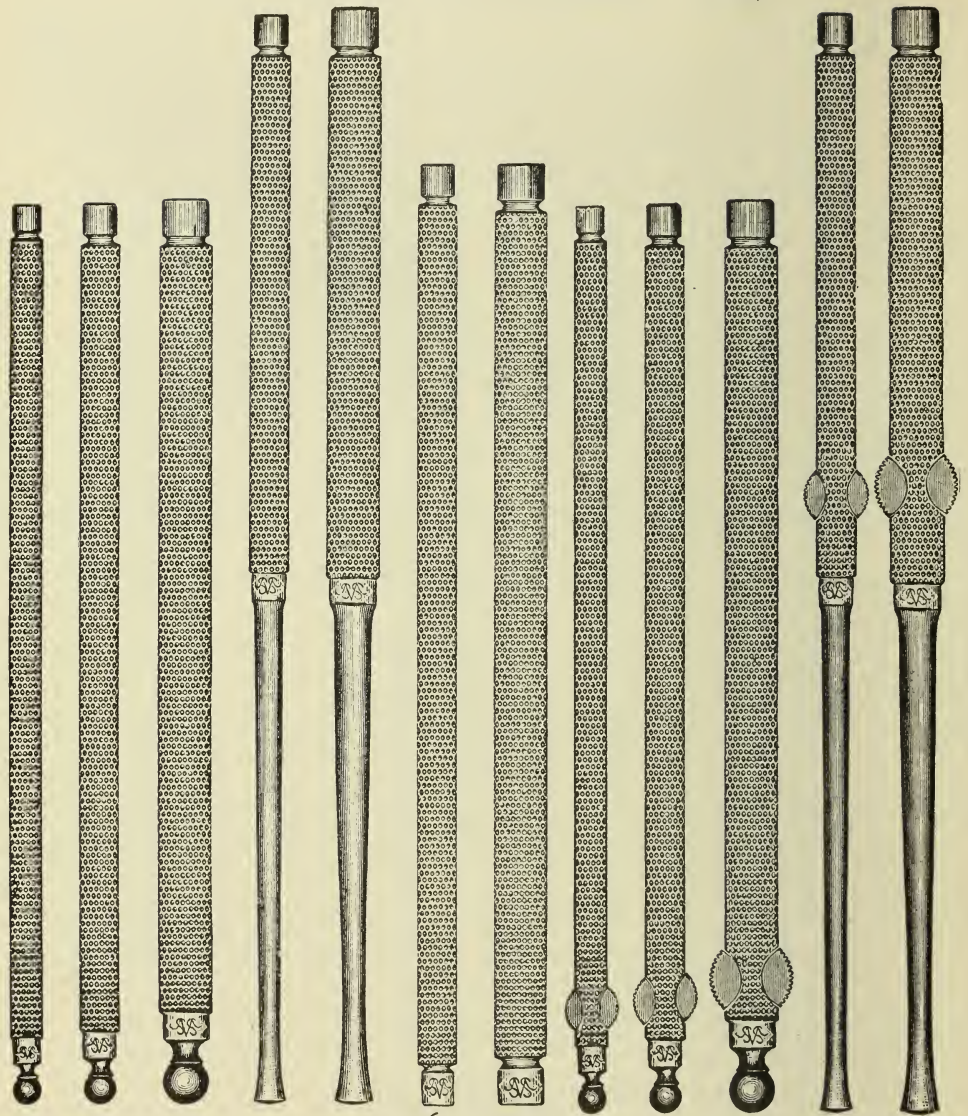
Dr. Mitchell says: "After an experience of twelve years with these Drills, I find them the most satisfactory shape I have yet tried. They have no tendency to draw or screw into the canal, as is the case with those Drills which have a twist or gain upon them, nor are they liable to break off in the canal.

"Their shape is such that they can easily be sharpened on an oil stone by placing the ball of the index finger upon the head of the drill, and holding the shaft between the thumb and third finger; a backward and forward motion across the stone does the rest. They are easily bent if a lateral motion be used in sharpening them.

"In using them a reciprocating motion with very slight pressure will ensure rapid cutting with perfect clearing of the debris."

Price for any Hand-piece.....(Figs. 1-5) each $ .50.

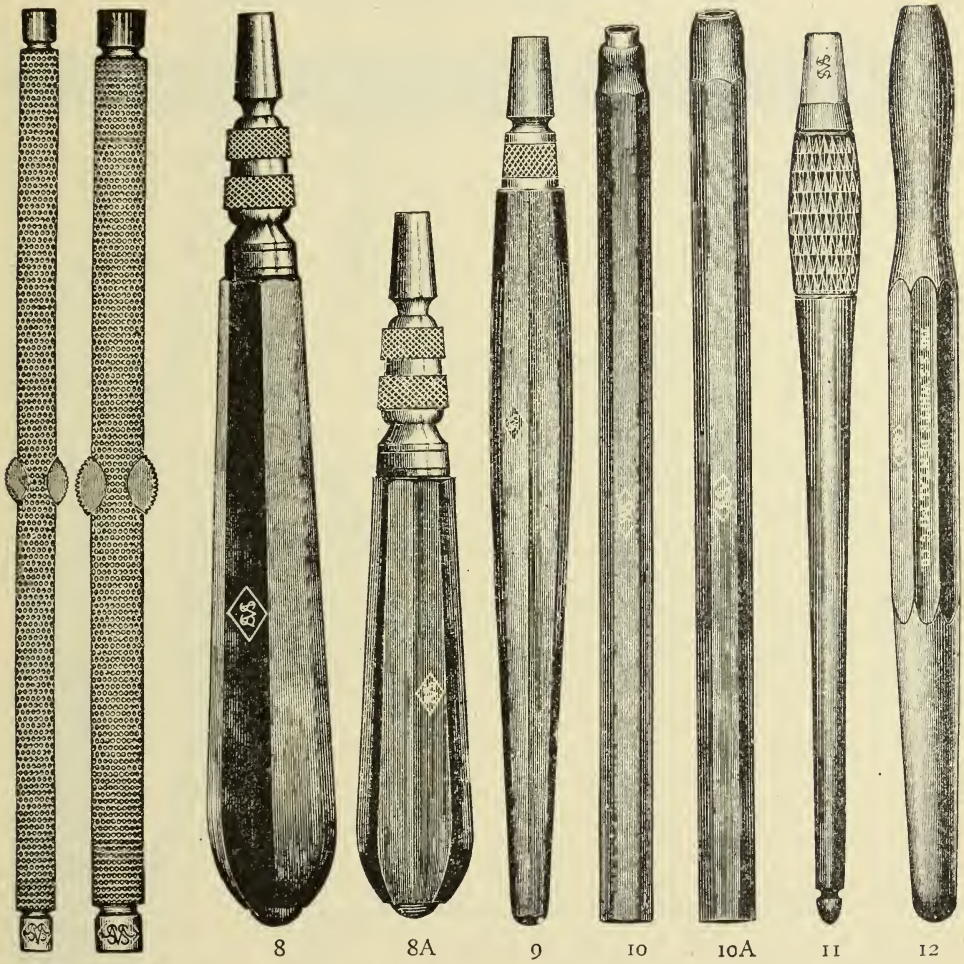
Socket-Handles for Cone-Socket Points;



Styles of Knurls.

NOTE.—Order Handles by Nunmber. Order Style of Knurl by Letter.

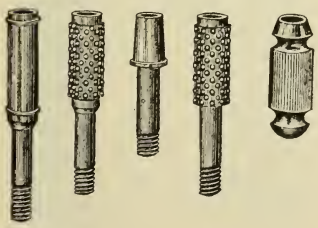
Socket-Handles for Cone-Socket Points.



6x 7x	8	8A	9	10	10A	11	12
$2.75	$7.20	$7.20	$5.00	$3.00	$3.00	$4.00	$6.00

Price per dozen.

Socket-Hubs.



A B C D E

A and B screw into the Cone-Socket Handles and take automatic mallet points.

C and D screw into automatic sockets and take Cone-Socket points.

E is designed for use between the thumb and finger for rotating cone-socket nerve-instruments.

PRICES.

"A," Hardened Steel	each	$ .30
"B," Knurled Steel	each	.15
"C," Hardened Steel	each	.30
"D," Knurled Steel	each	.15
"E," Knurled Steel	each	.15

We furnish Nos. 3, 4, 5, 8, 9, 10, 4x and 5x for automatic plugger points at same prices as above.

Ivory's Vulcanite Cone Socket Handle.

The shape of this handle will commend it. It is easy to work with. It does not tire the hand, and is finely finished.

Price, per doz..... .....$5.00

Hand Porte Polisher.

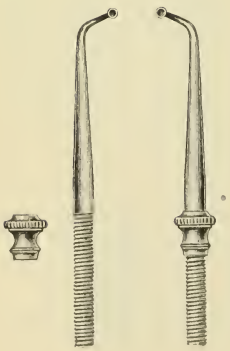
Made by J. W. Ivory.

The Jack Porte Polisher, improved by Dr. D. D. Smith, made to hold short pieces of orange wood sticks firmly and at the most convenient angle, for polishing the palatal and lingual surfaces of the upper and lower teeth and the buccal faces of all molars. Thorough polishing should always follow instrumentation for the removal of deposits on the teeth. With this important device any part of the mouth may be conveniently reached, enabling the most perfect treatment of all surfaces. Frequent *hand polishing* of all exposed surfaces of the teeth with orange-wood and pumice is strongly advised as constituting the only reliable prophylactic treatment for caries and pyorrhæ.

Price, each $2.50

Ivory's Lock Nut for Cone Socket Points.

Made by J. W. Ivory.

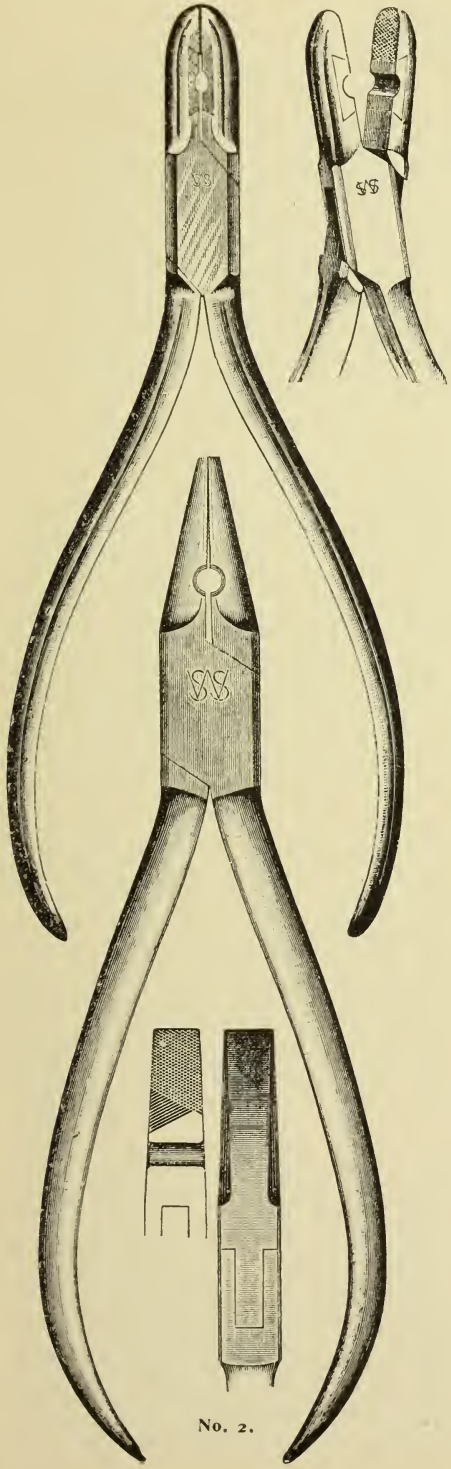


Consists of a regular C. S. or Automatic shank with the thread extending somewhat deeper on the shank. On this thread, a nut with a conical shoulder moves, so that when the cone socket or automatic instrument is screwed into the handle and tightened against the shoulder of the nut, the threads of the nut and those of the shank lock into each other, effectively holding the instrument in its handle.

It is evident that all cone socket and automatic instruments constructed after this manner will be a blessing to the profession, as plugger points and cone socket points heretofore have caused no end of annoyance by loosening under trifling pressure, and often when least expected.

Price, each ....$ .12

No. 1.



No. 2.

Pliers for Inserting and Removing Cone-Socket Points.

In order to set the points firmly in the handles it will be necessary to use more force than can be given with the fingers.

These Pliers are especially adapted for the purpose.

No. 1 is finely finished and nickel-plated. In both jaws are inserted copper plates which prevent the marring of the instruments and give firmer grasp than can be had with the No. 2 Pliers.

No. 2 is a flat-nosed Plier, with depressions ground in the jaws. Polished and nickel-plated.

PRICE.

No. 1 . . . . . per pair $1.75
No. 2 . . . . . per pair .90

Forms of Cone-Socket Points.

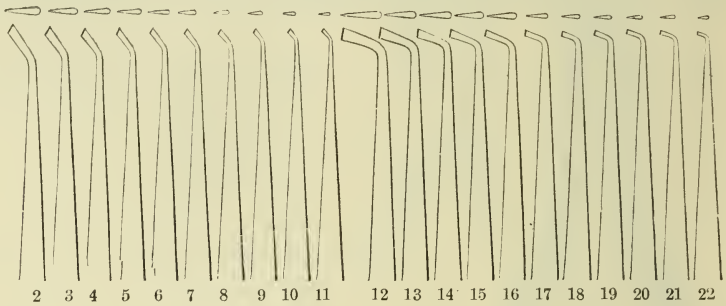
All cone-socket points are made with two forms of shanks.

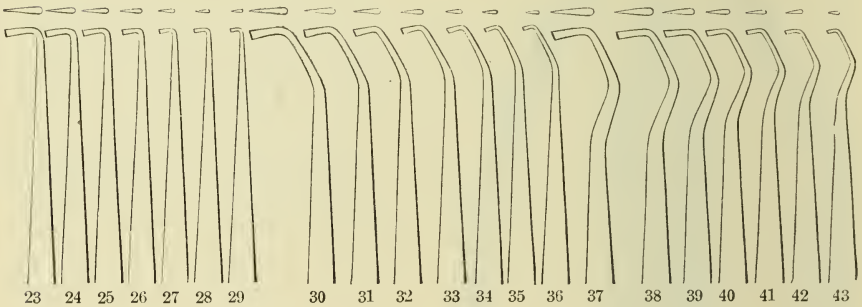
X is for small, delicate points
Y is for the heavier points.

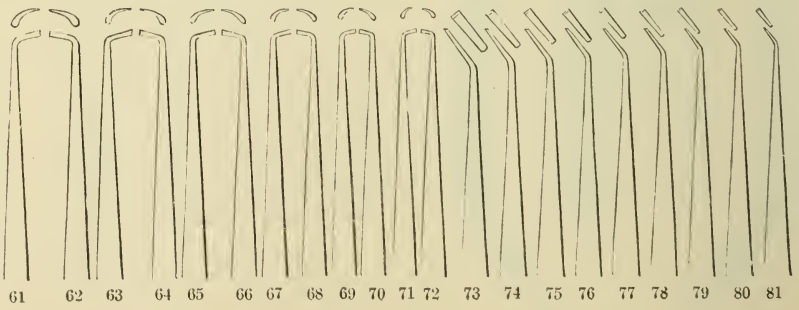
Y X

Excavators.

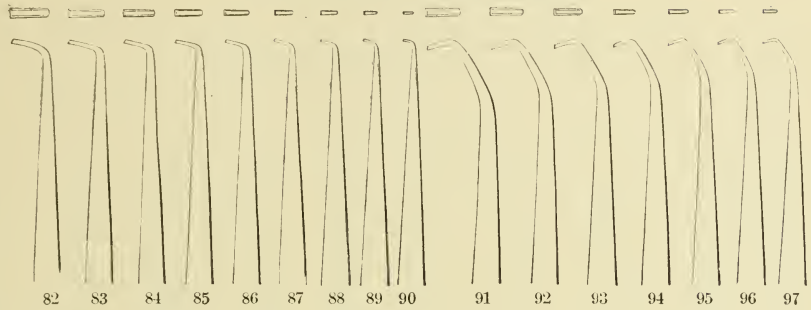
Octagon Handles, Nickel plated.....per doz. $2 50
Cone Socket Points.....each 12

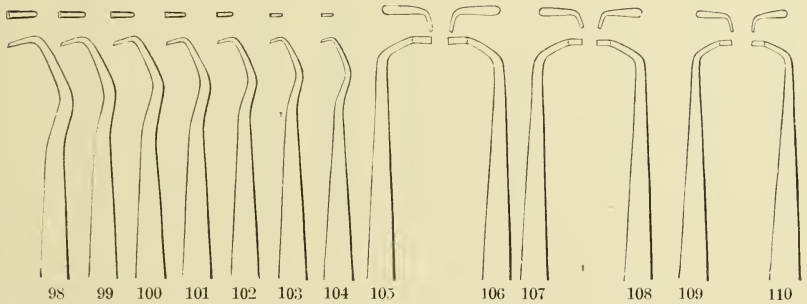


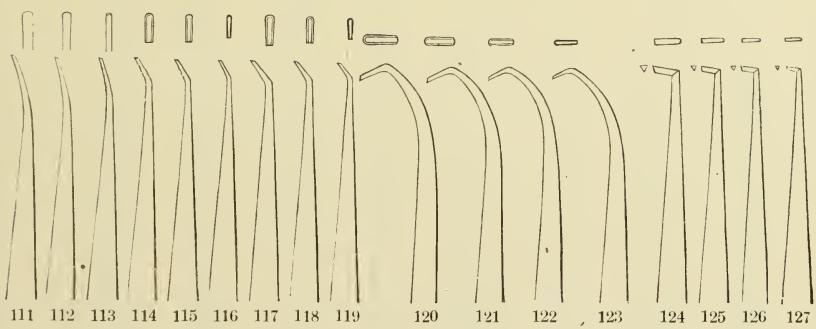


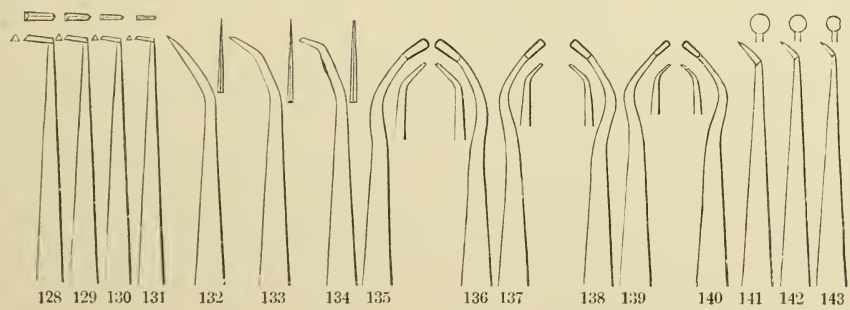


Excavators.--Continued.

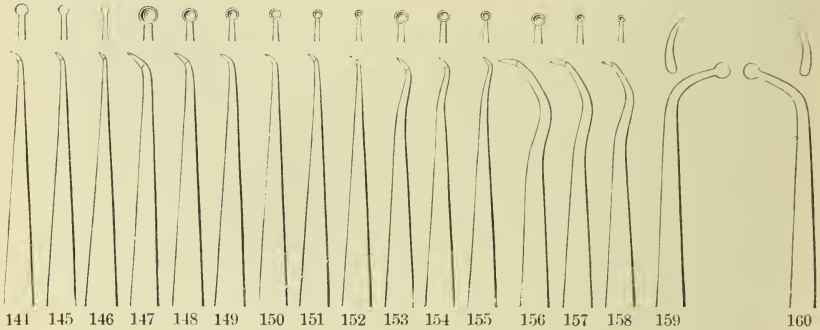


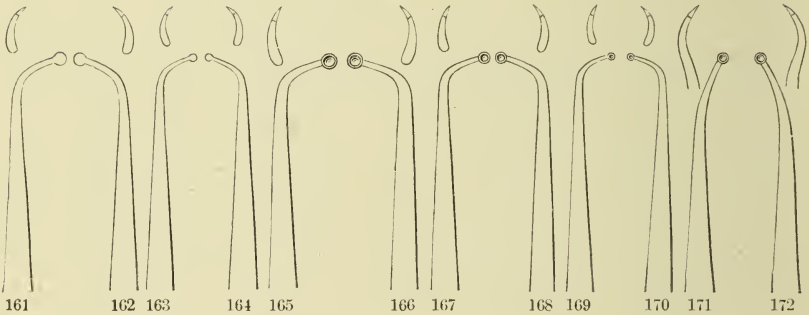


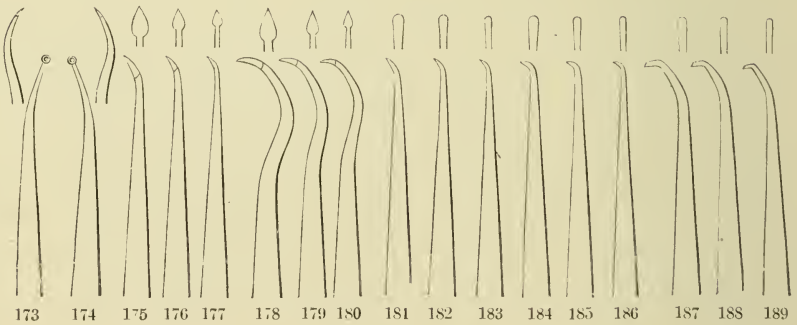


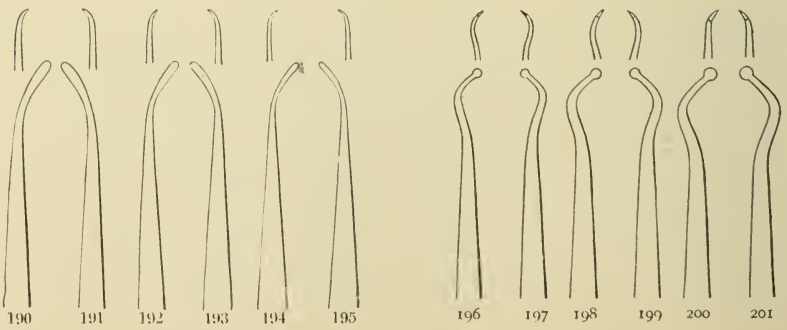


Excavators.—Continued.





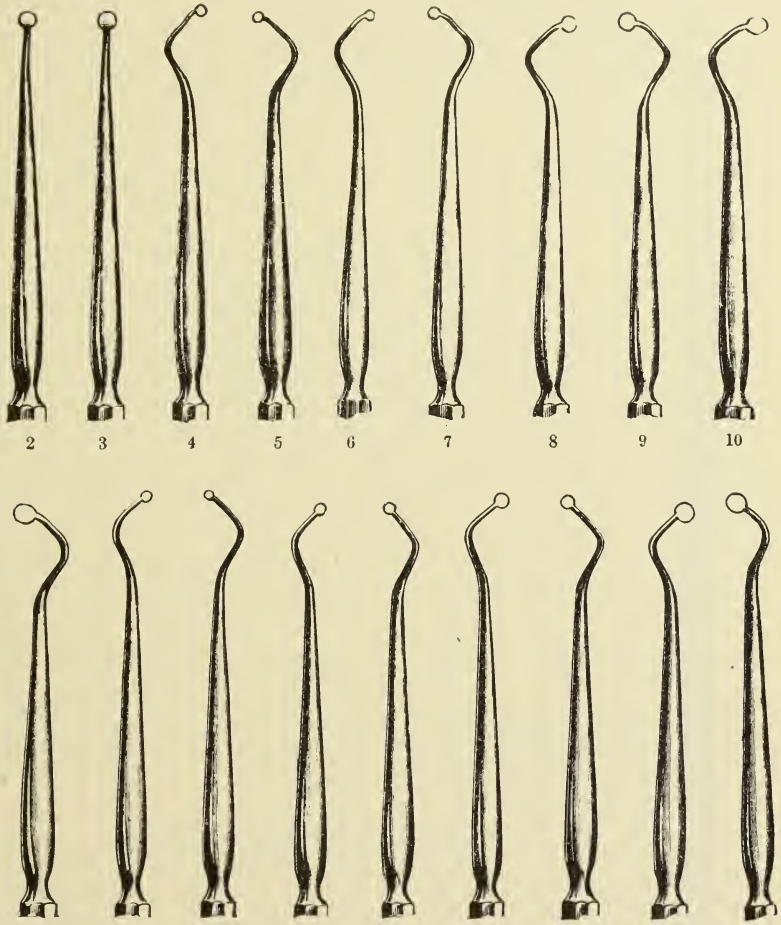




Gillett Excavators.

Made by The Boston Dental Mfg. Co.
Suggested and arranged by H. W. Gillett, D.M.D., Newport, R. I.
Designed for excavating in mesial and distal cavities.

1



2 3 4 5 6 7 8 9 10

11 12 13 14 15 16 17 18 19

Nos. 1-3 are almost a straight instrument with a slight bend and are useful in surface cavities, and are also found to be useful in finishing the gold fillings in fissure cavities.

Nos. 4-11 have a double offset, and are designed for deep crown, and distal cavity excavating.

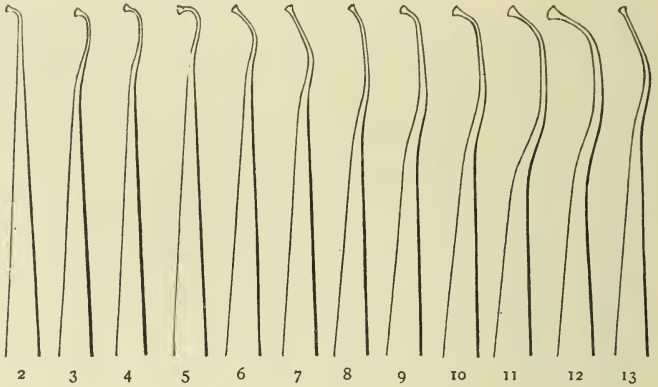
Nos. 12-19 have a single offset, and are designed for surfaces presenting towards the operator, i. e., mesial cavities.

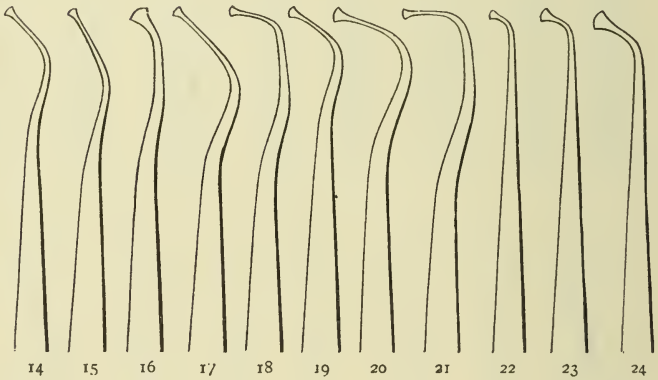
The blades are very thin; the inner surface being flat, the instrument can be easily honed.

The practical efficiency of this set of instruments will be found in the removal of soft decay, and for general excavating in the whole range of cavities.

Price, each..... $0.25
Price, per set, 19..... 4.50

Battle-Ax Excavators.

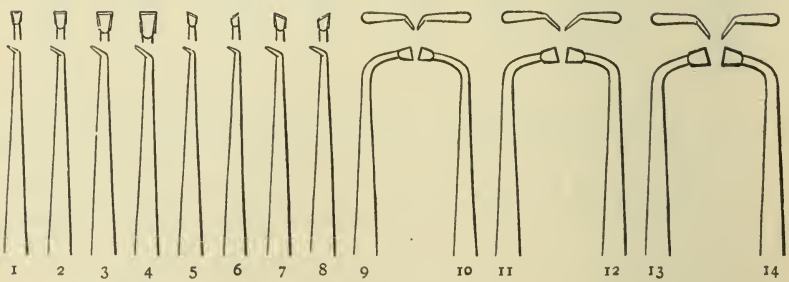




PRICES.

Plain Octagon Handles.....per doz., $4 00
Cone Socket Points..... " 2 75

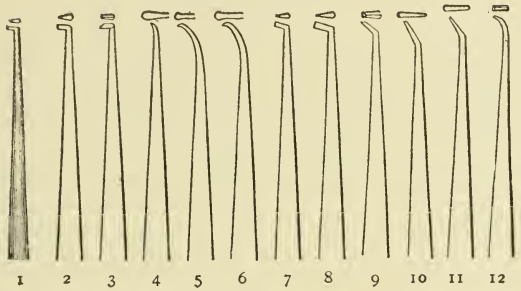
Bennett's Chisel Excavators.



Made only for Cone Socket Handles.

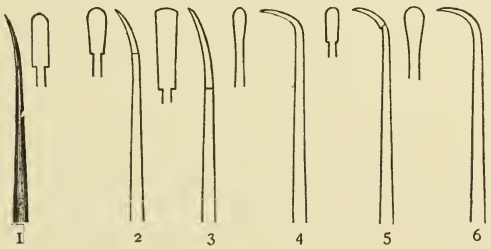
Price.....each, $0 15

The Palmer (or best) Excavators.



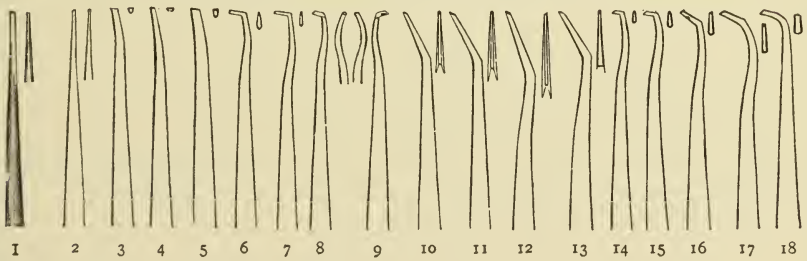
Made only in Octagon Steel Handles.
Price.....each $0.50

Butler's Rapid Excavators.



Made only in Octagon Steel Handles.
Price.....each $0.50

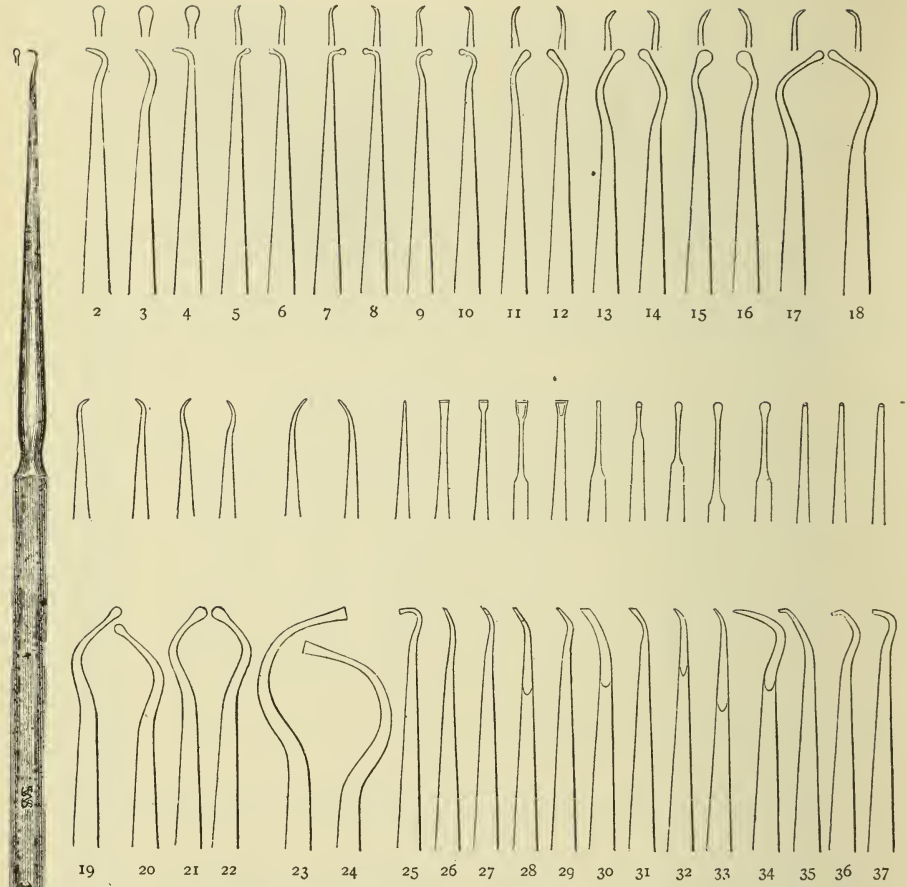
Dr. W. C. Head's Approximal-Surface Instruments.



Made only in Octagon Steel Handles.
Nos. 1 and 2.....each $0.30
Nos. 3 to 18.....each .50

There are just two ways on earth to sharpen a spoon excavator. One way is to hire the man who made it to do it. The other way is to do it yourself with a grooved Carborundum Hone. See page 278.

Darby-Perry Excavators.



PRICES OF EXCAVATORS.

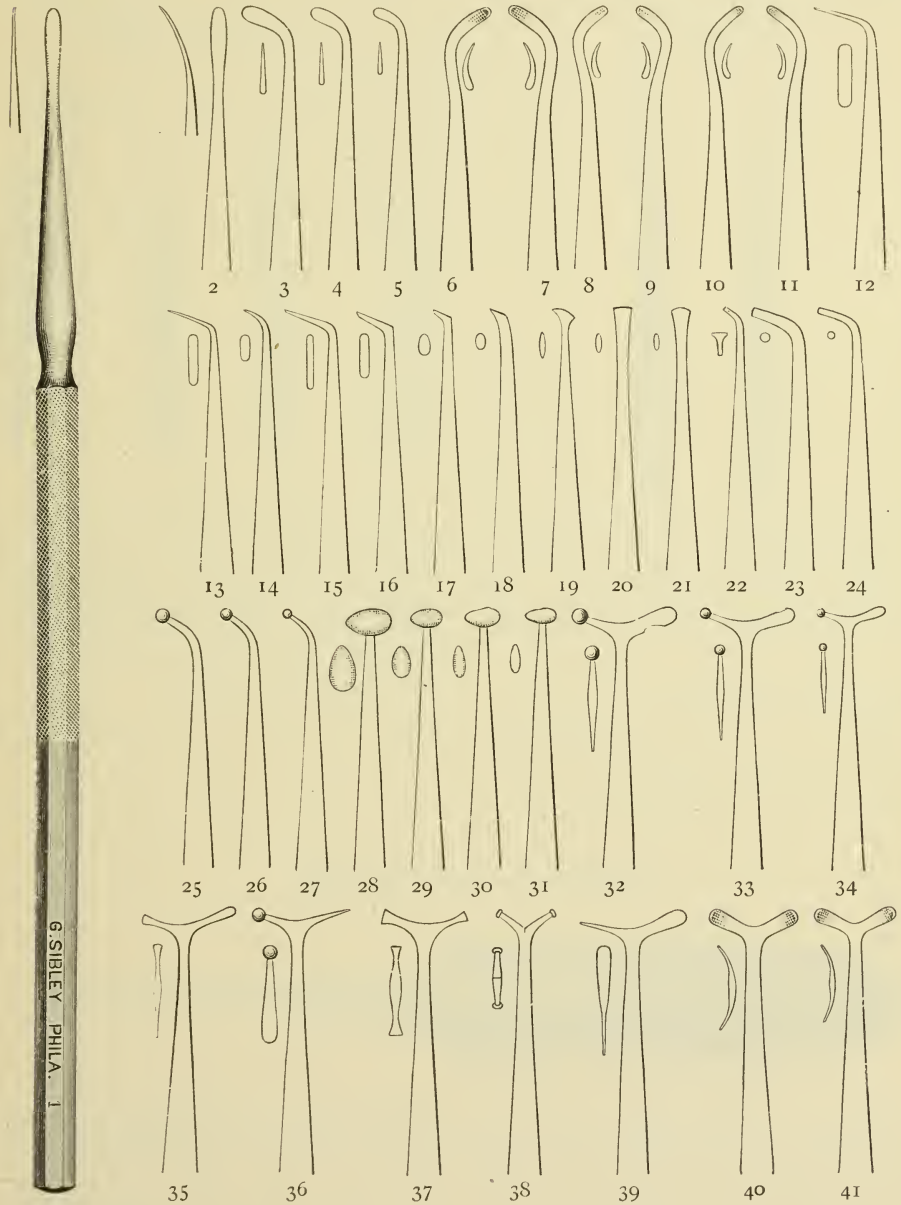
	Plain Octagon Handles.	Cone-Socket Points.
Per set of 37	$0.50	$6.00

SEPARATELY.

Nos. 1 to 22	each	$0.25	$0.15
" 23, 24	"	.30	.20
" 25 to 27	"	.25	.15
" 28 to 37	"	.30	.20

We are glad to send steel instruments of any kind "on suspicion." We will also send several for choice if we are asked to. It is often pretty hard to tell just how an instrument is going to act by looking at a picture of it.

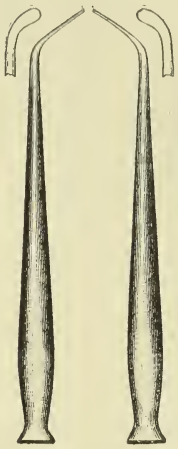
Burnishers.



PRICES.

Nos. 1 to 31 —¼ in. File-cut Handles	each	$0.50
" 32 " 41— " " " "	"	.60
" 1 " 31—Cone-Socket Points	"	.35
" 32 " 41— " " "	"	.45

Goldsmith's Right and Left Thin Burnishers.



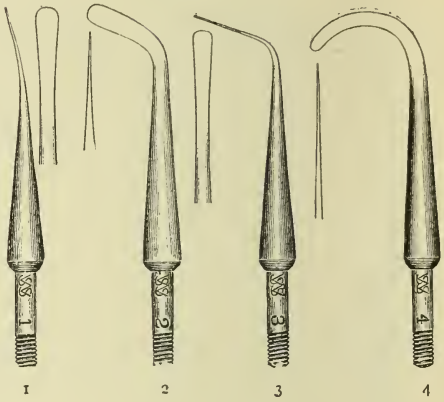
These Burnishers have a double curve, somewhat difficult to show in the cut, but which specially adapts them to all approximal fillings, right or left, in either jaw.

In Long Handles only.

Price ....each $ .50

Gordon White's Burnishers,

For Approximal Fillings.



The chief peculiarity of these Burnishers is the extreme thinness of the blades. In addition to this the sickle-shape of No. 4, Dr. White says, makes it the most useful one he ever had.

For Cone-Socket only.

Price ....each $ .35

Chupein's Gum Retractor.

Designed to hold back the gum, or the rubber dam, while filling those very troublesome cavities which extend under the gum on the labial surfaces of the anterior teeth.

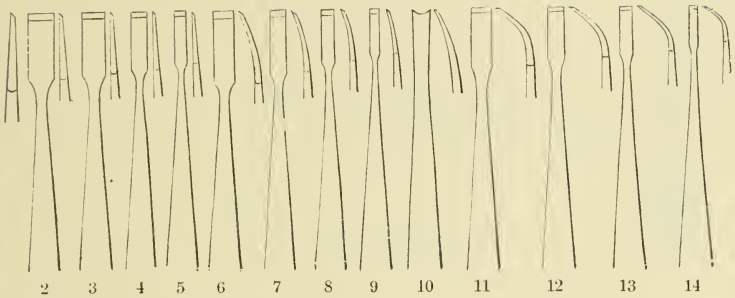
The Retractor is to be held in the left hand of the operator, or by the assistant, and is so nicely shaped that its hold on the tooth-neck is close, to exclude moisture, and secure against slipping.

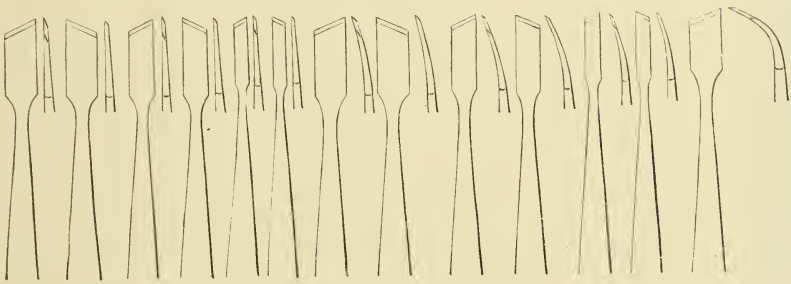
Ebony Handle.

Price ....each $ .75

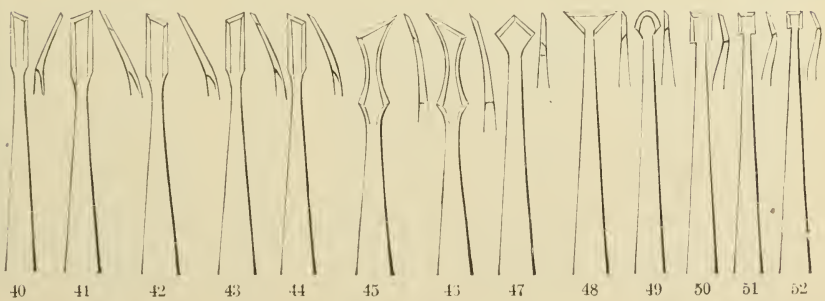
Chisels.

G. SIBLEY PHILA. 1


2 3 4 5 6 7 8 9 10 11 12 13 14


15 16 17 18 19 20 21 22 23 24 25 26 27

28 29 30 31 32 33 34 35 36 37 38 39


40 41 42 43 44 45 46 47 48 49 50 51 52

1

Enamel Cleavers.

Dr. C. S. Case's.

Made by C. Ash & Sons, Limited.

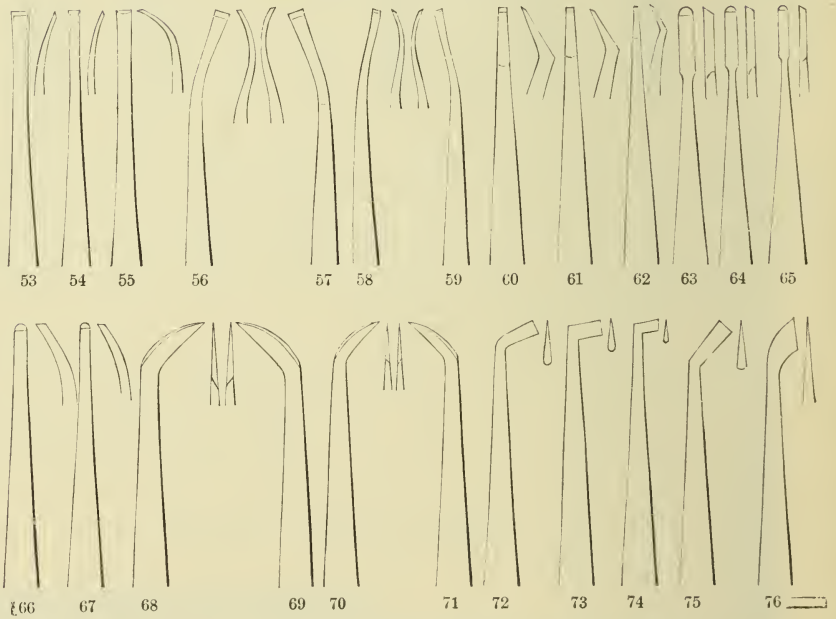
Suitably shaped for forcing under the gum without injuring it; worked with a pulling motion. Made in right and left sides in ebony handles.

PRICES.

In Ebony Handles, - each, $0 60
Cone Socket point, - - " 35

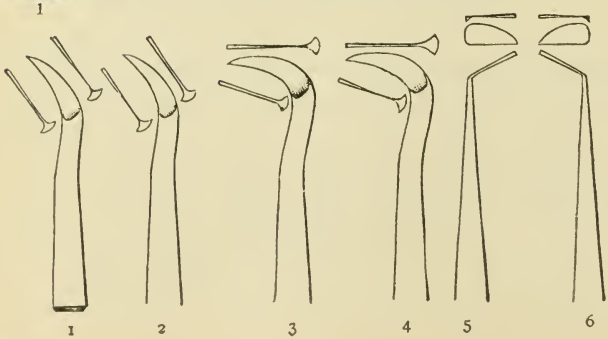
2.

Chisels.—Continued.



PRICES.

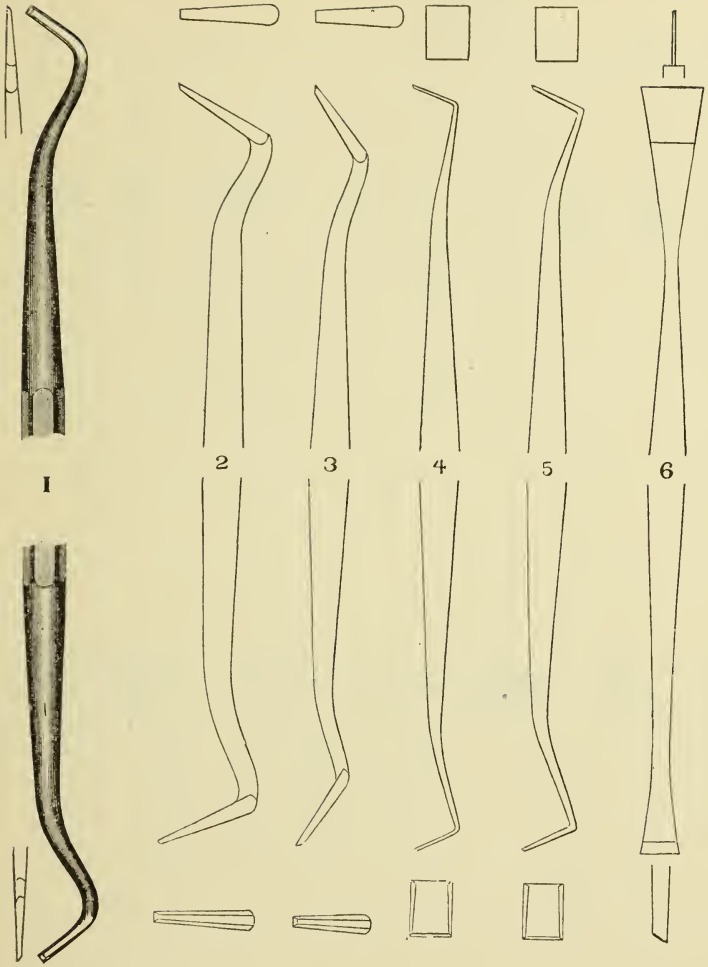
File-cut Handles ..... each $0.50
Cone-Socket Points..... " .35



Dr. How's Fissure Chisels.

They cut only on the floor of a fissure, and deepen it without wasting time or force on the sides.

Price, ¼-in. File-cut Long Handles. each $0.65
Price, Cone-Socket Points ....each .50



Brown's Heroic Chisels.

This set of instruments is designed to do nearly all the heavy trimming away of enamel, both on the exposed surfaces of the teeth and on their approximal surfaces. Several of the points are also valuable for scaling calculus and removing stains.

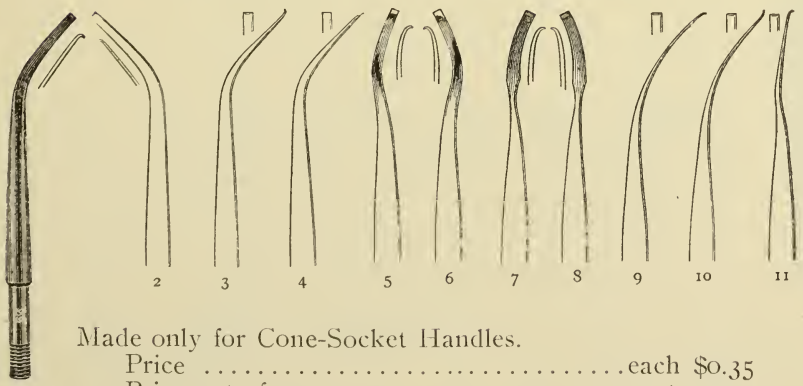
The forms of the heavy points will explain their uses, for "heroic" chisels; the thin blades only to be used where necessary on account of limited space between the teeth.

Made only on Octagon Steel Handles.

PRICES.

	Each,
Nos. 1, 2, 3	$1.50
Nos. 4, 5, 6	1.60

Tompkins' Scalers for Pyorrhea Treatment.



Made only for Cone-Socket Handles.

Price	each	$0.35
Price, set of 11	per set	3.75

Scalers.

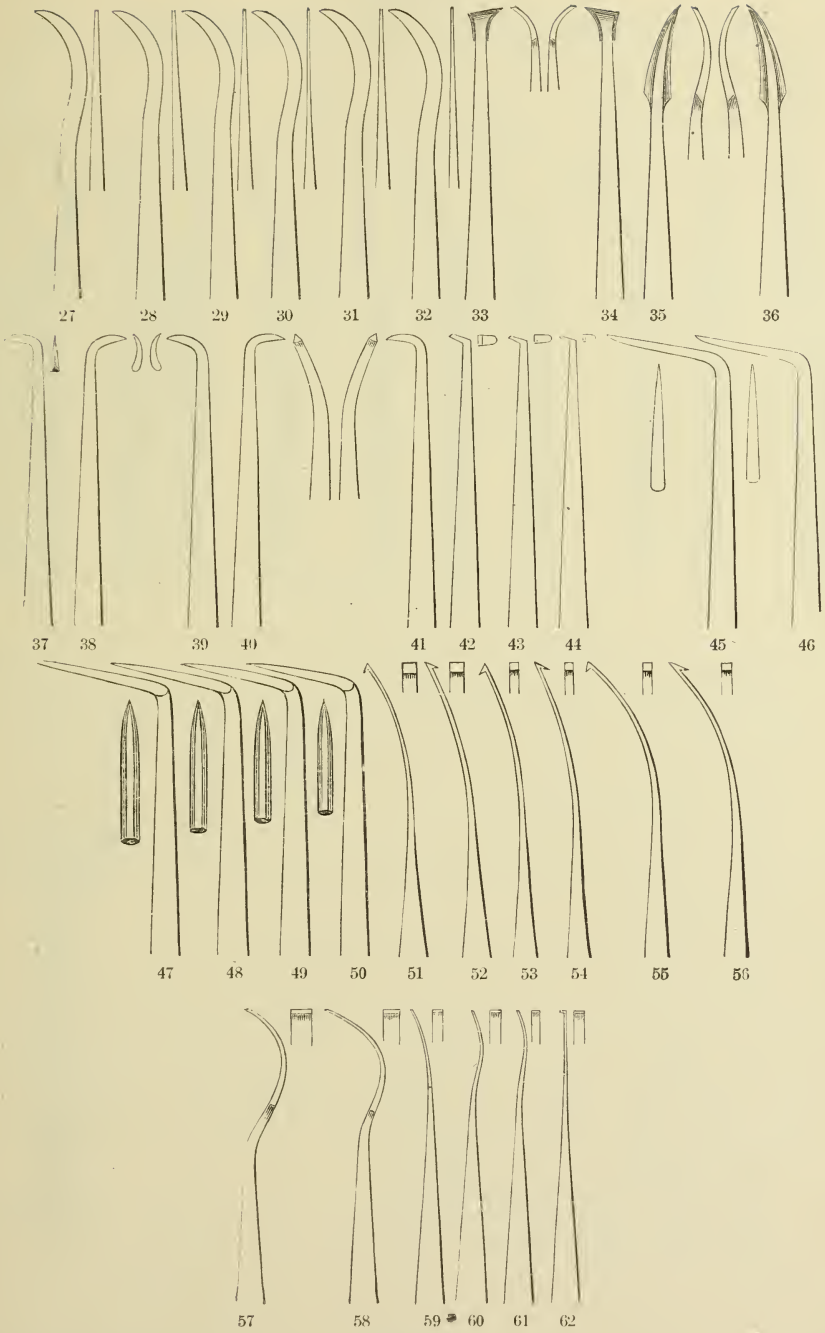
1

2 3 4 5 6 7 8 9 10

11 12 13 14 15 16 17

18 19 20 21 22 23 24 25 26

Scalers.



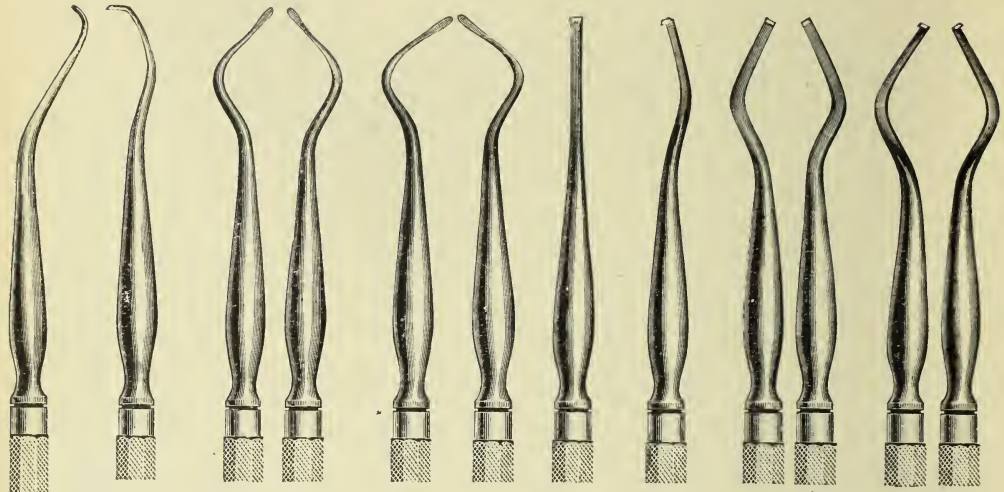
PRICES.

File-cut Handles	each $0.50
Cone-Socket Points	each .35

For Darby-Perry Scalers see page 224.

Dr. J. E. Craven's Scalers for Pyorrhoea Work.

Made by H. D. Justi & Son.



This set of 12 Scalers will reach almost any location in the mouth, where pyonal calculus will accumulate.

They should not be used for ordinary tartar hooks, and should always be kept absolutely sharp; for this latter purpose it is best to use a knife blade slip of Arkansas stone.

The goose-neck forms Nos. 1 and 2 are for applying force directly from or toward the operator, between teeth.

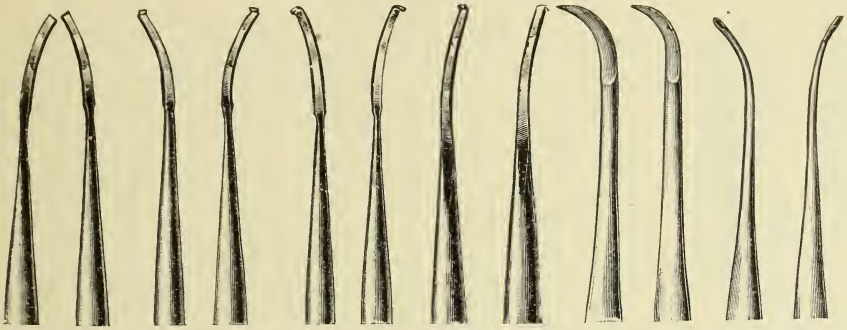
The slender cow-horns, Nos. 3, 4 and 5, 6, are right and left pairs, designed to apply the serpentine movement necessary to penetrate between roots of molars where the ravage of Riggs' disease often extends, and in which cases it is so difficult to treat successfully.

Of the flat forms Nos. 7 and 8 are for operating about the roots of anterior six teeth of either jaw; their forms will suggest their uses.

Nos. 9, 10 and 11, 12, are right and left pairs, 9, 10 being expressly applicable to the sides of necks and roots of inferior molars and bicuspids; they often are convenient in certain locations of the upper set. Nos. 11, 12 are expressly designed for passing between the molars and applying force to scrape the anterior faces of anterior roots of lower molars (or bicuspids) and anterior faces of palatine and anterior buccal roots of upper molars; the force is applied away from the operator with this latter pair.

Price per set, Nickel-Plated Handles.....$6.00
Price each, Nickel-Plated Handles..... .50
Price each, Socket Points..... .35

Harlan's Scalers.



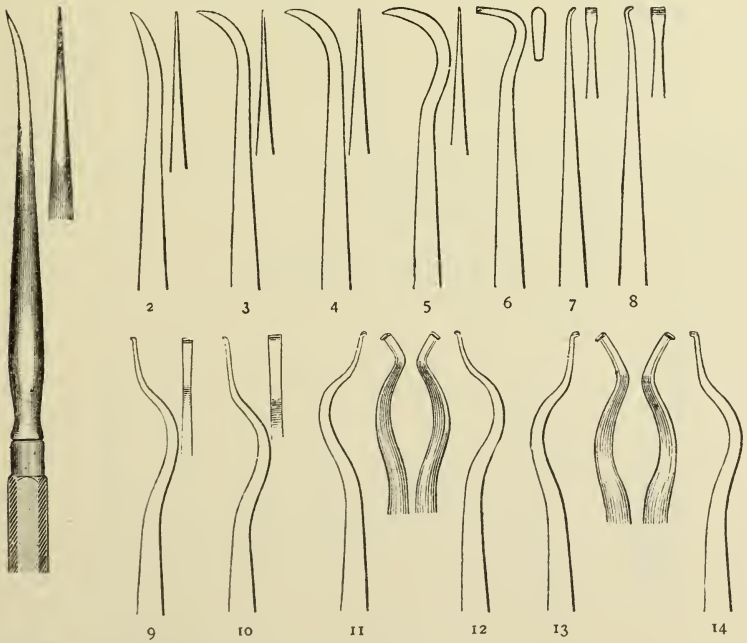
These instruments are not intended for the heavy work of removing salivary deposits, but for the finer operations for which they are specially designed they will be found indispensable.

Made in long handles only.

Prices,.....each $0 50
" .....per set 6 00

Dr. F. Abbott's Set of Scalers.

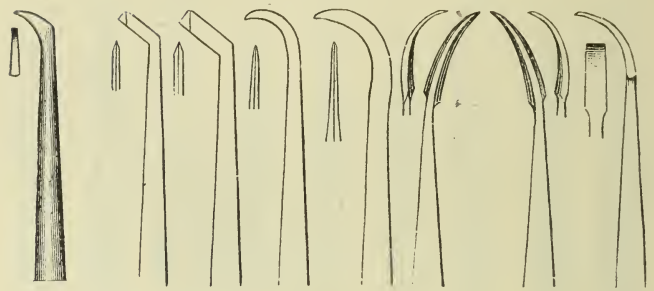
For Removing Calcular Deposits.



These Scalers are so shaped as to cut either forward, backward, or laterally. Made in long handles only.

Price, File cut handles..... .....each $0 50

White's Small Scalers.



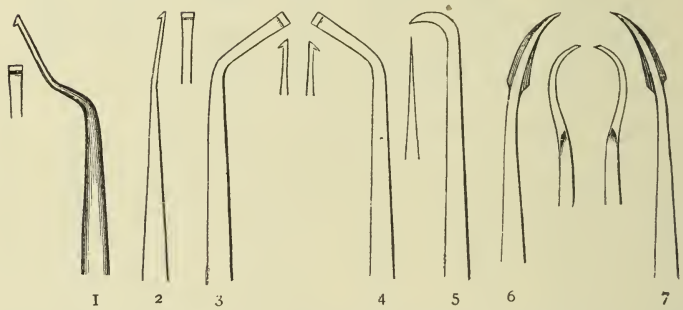
Sold only permanently mounted in long ebony handle, same as No. 11, page 205.

PRICE.

Ebony Taper Handles, Finger-hold Checkered.....each $0.50

King's Scalers.

Devised by Dr. S. H. King.

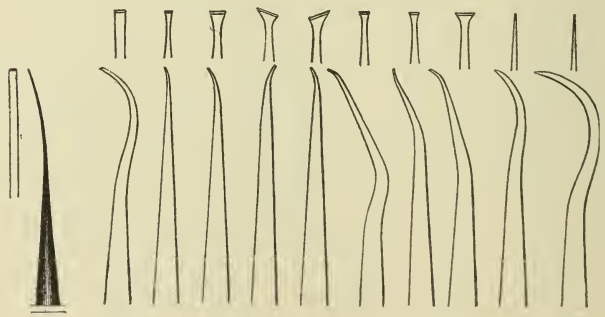


Sold only permanently mounted in long ebony handle, same as No. 11, page 205.

PRICE.

Ebony Taper Handles, Finger-hold Checkered.....each $0.50

Darby-Perry Scalers.



PRICES.	File-cut Ball-end Handles.	Cone-Socket Points.
Per Set of 11	$6.25	$3.50
SEPARATELY.		
Nos. 1 to 3	each $0.50	$0.25
Nos. 4 to 11	each .60	.35

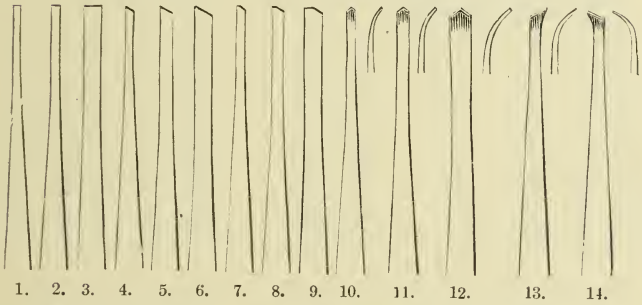
Separating Saws.

For making separations between the teeth preparatory to the use of disc or strip, without risk of wounding the gum. It permits very delicate manipulation.

Price, complete $0.75
Chuck only..... ..... .35
Cone-Socket handle .... .15
Saw only..... .... .25

Hard Bits.

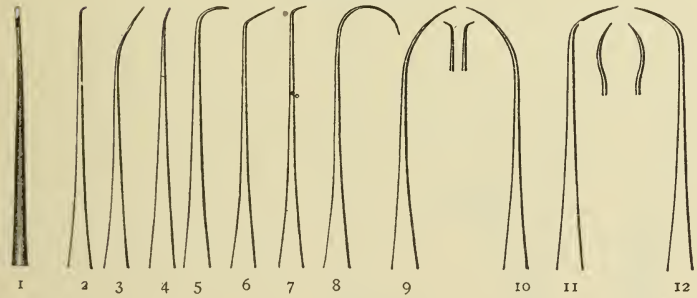
Except Nos. 13 and 14 they are square-edge.



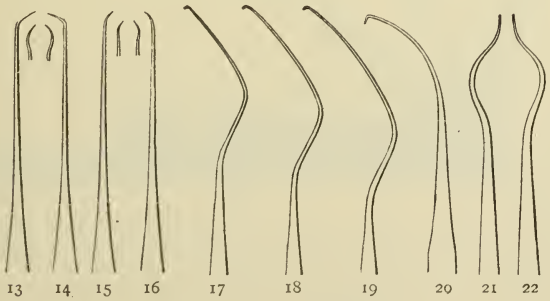
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14.

Made only for Cone-Socket Handles.....each $0.30

Explorers.



1 2 3 4 5 6 7 8 9 10 11 12



13 14 15 16 17 18 19 20 21 22

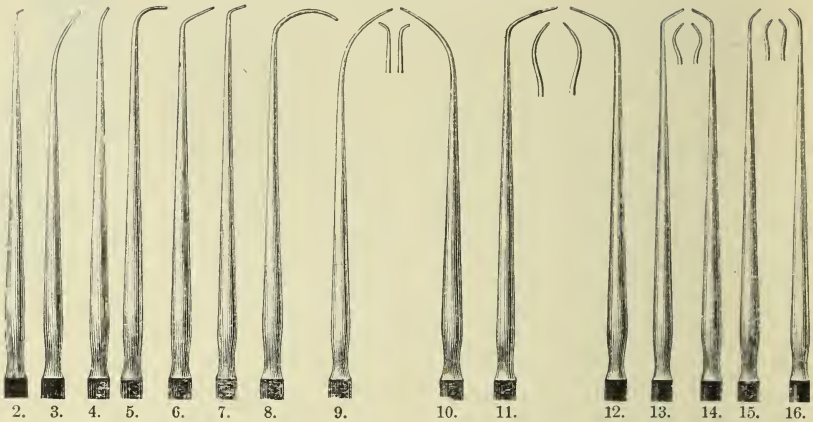
PRICES.

Octagon Handle ....per doz. $2.50
Cone-Socket Points ....each .12

Probes.

With very fine points.

Made by C. Ash & Sons, Limited.



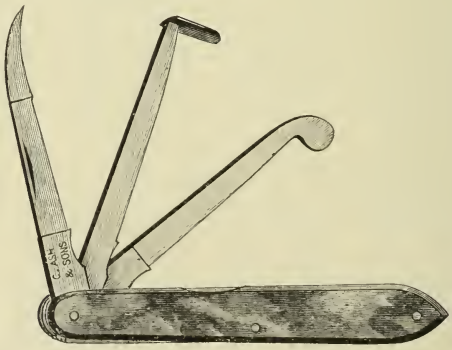
2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16.

In small round blued-steel handles with turned ends. They form a very useful set, but the points are too fine to admit of the instruments being nickel-plated.

Price, blued or N. P. (Figs. 1-16).....each $0.25

Lancets.

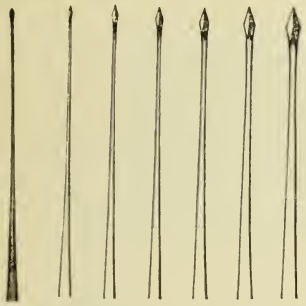
Made by C. Ash & Sons, Limited.



	Blades.		
	1.	2.	3.
Lancets for pocket, in Tortoise-shell handles.....each	$1.00	$1.50	$1.75

Nerve Instruments.

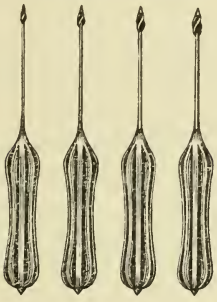
Hopkins' Nerve-Canal Reamers.



Made in long octagon steel handles only.

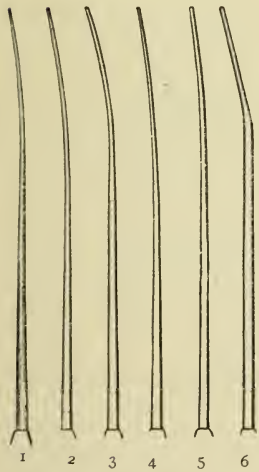
Price ....each $0.30

Nerve Canal Drills.



Price ....each $0.50

Donaldson's Flexible Spring Canal-Pluggers.



These pluggers have spring enough to stiffen them for effective use, and are still flexible enough to be bent for individual cases. They are of graded thinness from 1 to 6, the last the thickest, and the handles correspond with the six styles of cone-socket knurl from A to F; so that the operator may readily distinguish the number by its peculiar handle.

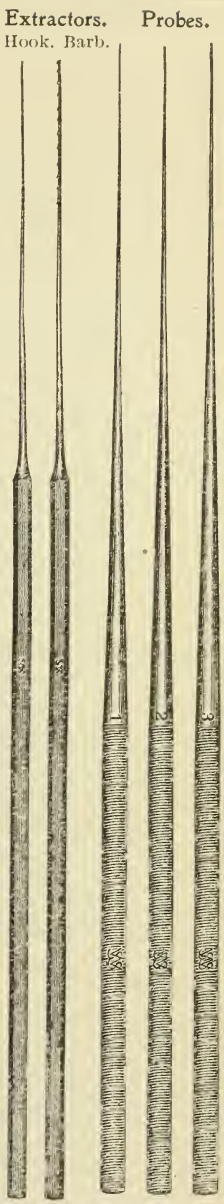
Price ....each $0.30

Gold Pointed Probe.

Fine Wood Handle, Hexagon Ferrule, to elevate point and prevent rolling on the table.

14-K Gold Point. Useful for introducing dressings into root canals. Not affected by iodine, etc.

Price, Gold Pointed Probe.....$0.35



NERVE EXTRACTORS.

Hook and Barb.

Made of best quality steel, drawn temper; will follow the canal readily.

Octagon Handles.

Price ....per doz. $2.50

NERVE PROBES.

Three sizes, round steel handles.

Price ....per doz. $2.00

Flagg's Gold and Platinum ....each 1.25

Our Own Brand of
Barbed Nerve Extractors.

It is customary for people who make a broach to sell at a low price to claim it to be the best broach on the market, regardless of price.

We are not that kind of people.

We do not make our own broaches. They are made especially for us. If we made them ourselves we would have to sell the best broaches we could employ one or two or three men to make for us.

As it is, we have the markets of the world to choose from. We are a lot more particular about the broaches we sell than any dentist is about the broaches he buys.

The result is that our own brand of broaches we honestly believe to be a better article than anybody else sells at anything like the same price.

We are always ready to buy back any of our broaches that are not just exactly what we claim them to be.

Price, assorted, per dozen.....$0.50
Price, assorted, per gross..... 5.00

Classified Broaches.

We also have a line of broaches put up in classified packages, as follows:

No. 1, containing one dozen assorted small, extra small, medium, and large sizes—Soft and Half-Soft.

No. 2, containing one dozen extra small—Soft and Half-Soft.

No. 3, containing one dozen small—Soft and Half-Soft.

Other assortments to order without extra charge.

Price .....per package $.50
Price .....per gross 5.00

We send "Regular" unless "Extra Thin" is specified.

Iridium-Platinum Nerve Extractors.

Not corroded by iodine, acid, or dampness. Can be cleaned by heating in the flame of spirit lamp.

PRICES.

Quarter dozen, Barbed, each $ .40; per pkg.....$1.20
Quarter dozen, Hooked, each $ .40; per pkg..... 1.20

Holdfast Broach Holder.

Made by Lee S. Smith & Son, Pittsburg.

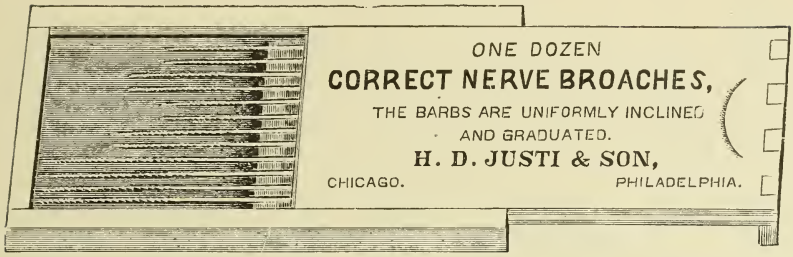
This is the neatest little broach holder we know anything about It is dainty. It is just exactly the sort of holder or handle a dentist ought to have for carrying as small and delicate a thing as a broach.

The handle is vulcanized rubber. The metal parts are nickel plated. The holder is light, graceful, and a big step in advance of the clumsy metal and bone holders that have been used for so many years.

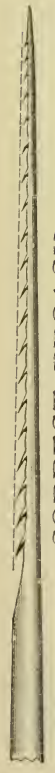
Price, each ..... $ .40

Correct Nerve Broaches.

The Most Perfect and Only Uniform Broaches Ever Produced.



Our aim always to excel in the manufacture of all products from our factories, prompts us to call attention to another edition to our list of improvements, our CORRECT NERVE BROACHES, which we are confident will be accepted by the profession as superior to all others. We have for years supplied Broaches which were justly celebrated, but the Correct Broaches have entirely eclipsed them.



Their advantages over ordinary Broaches are explained in a few words. They are made of the finest and toughest quality of steel, the different sizes being equally proportioned, the barbs being uniformly inclined and graduated, whereby they can be inserted and withdrawn from the canal with the greatest ease and least perceptibility.

The breakage of ordinary NERVE BROACHES in the canal is caused either through the uneven length of the barbs or an inferior quality of steel.

Another advantage of our Correct Broaches is the manner in which they are packed; they are put up in wooden boxes, provided with grooved blocks in which the Broaches fit snugly, protecting them from injury. The blocks can be readily removed from the boxes for the purpose of selecting the required Broach.

Nerve Broaches put up in Paper Packages are liable to rust through the penetration of the paste from the labels, and in opening them they invariably become mixed.

Price, per doz. ..... $ .50
Price, per gross 5.00

H. D. JUSTI & SON.

Ivory's Spiral Nerve Extractors.

Patented January 6th, 1891.

Mr. Ivory has made a great improvement in these broaches over the first he put on the market, both in temper and toughness, besides having them as fine as the finest, with sufficient pliability to enter the most tortuous canals; so that now there could be nothing better desired for the purpose of removing from the nerve canals their vessels and contents.

He manufactures them out of platina and iridium as well as steel. Those of the former have all the toughness and pliability of the steel, besides having the various "known" advantages of these metals, not rusting or corroding with the different chemicals, iodine, etc., sometimes used in treament of the various ailments to which teeth are subject.

METHOD OF USING.

As soon as the point of the Extractor enters the canal chamber, twist it to the right as you would a corkscrew ,and keep on turning in the same direction until by the delicate touch or feeling you have a firm hold of the vessels, then draw away. Almost invariably it will be found that you extract them bodily, without tearing or severing the vessels, as has been so often done by barbed broaches. In medicating canals, wind a shred of cotton on the point of the instrument, and you can carry medicine right to the apex of the root.

We give only only one testimonial out of a great number we have received:

Send me one dozen Spiral Nerve Broaches, medium and small sizes. I don't want the large ones. They are the best Nerve Broaches out, after one has tried them. You remember I did not think so at first, don't you?

M. L. McKellops, D.D.S.

Price, per doz., steel ..... $ .75
Price, per half doz., platina and iridium 1.00

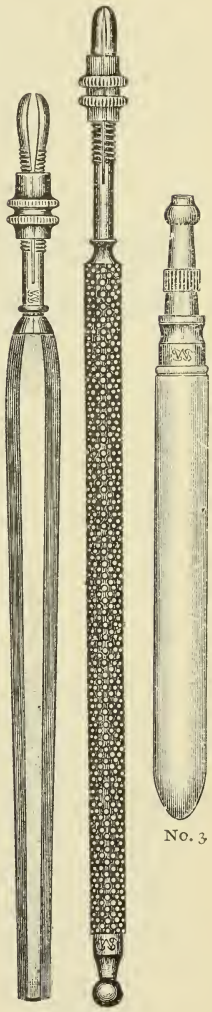
Nerve-Broach Holders.

Nos. 1 and 2 have a screw-ring to clamp the jaws so as to hold the broach securely. No. 3 has a screw-clamp.

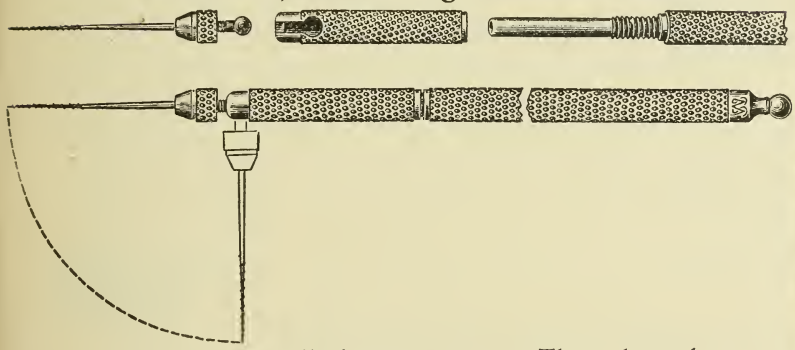
PRICES.

No. 1, Ivory Handle.....$1.00
No. 2, Knurled Steel Handle..... .75
No. 3, Bone Handle..... .10

See also Holdfast Holder on page 228.



Elliott Adjustable Angle Broach Holder.



This picture tells its own story. There have been a good many adjustable broach holders made, but they have been clumsy, complicated affairs. This is the best adjustable holder we know of.

Price .....each $ .75

Nerve Paste for Devitalizing.

Put up in $\frac{1}{8}$ oz. glass-stoppered bottles, price per bottle, 50 cents.

Devitalizing Nerve Fibre.

A preparation of Arsenic, Creosote, Tannin and Opium. Put up in screw cap bottle ready for use.

Price per bottle .....75 cents.

Finger-Rests.

Made of vulcanized rubber to slip over shank of Plugger, Excavator, etc. They afford a good pushing surface. Simply pushing them on keeps them on.

PRICES.

Finger-Rests Nos. 1 and 2.....each $ .10
Finger-Rests Nos. 1 and 2..... per doz. 1.00

Donaldson's Bristles and Cleansers.

Every once in awhile some manufacturer blossoms forth with an announcement that he has discovered and placed on the market a canal cleanser as good in every respect as a Donaldson cleanser at about half the price of a Donaldson, but they haven't delivered the goods. Dentists long ago stopped taking such statements seriously. They go right on buying more of the Donaldson bristles and cleansers every month, paying Donaldson prices and having Donaldson satisfaction.

It is the old story of quality.

Dr. Donaldson's Spring-Tempered Nerve-Bristles.

Put up in boxes or packages of half-dozen as follows:

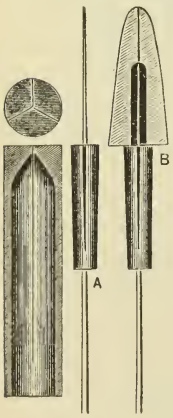
	PRICES.	
No. 1. Four hooks and two roughened (handles)	per box	$1.25
No. 2. All hooks (handles)	each	.25
No. 3. Four hooks and two roughened (no handles)	per pkg.	$0.75
No. 4. All hooks (no handles)	each	.15
All roughened (handles)	per box	$1.25
All plain (handles)	each	.25
All roughened (no handles)	per pkg.	$0.75
All plain (no handles)	each	.15

Dr. Donaldson's Pulp-Canal Cleansers.

PRICES.

Put up in boxes or packages of half a dozen as follows:

No. 1. Assorted sizes (handles)		
No. 2. All fine (handles)		
No. 2. All medium (handles)	per box	$1.75
No. 3. Assorted sizes (short handles)	each	.30
No. 3. All fine (short handles)		
No. 3. All medium (short handles)		
No. 4. Assorted sizes (no handles)		
No. 4. All medium (no handles)		
No. 5. All fine (no handles)		
No. 6. Assorted, for Adjustable Holder (no handles)	per pkg.	$1.25
No. 6. All fine (no handles)	each	.25
No. 6. All medium (no handles)		
"B" Between fine and medium (no handles)		



Canal Probe Gauge.

The enlarged sectional cut exhibits the structure of the three-jawed spring gauge, into the open end of which is thrust any fine probe, shown in full size at A. The friction grip of the jaws enables the probe to be pushed into the root-canal to the apical foramen for exactly gauging the length of the root, as at B. When the canal has been suitably drilled the same probe and gauge may be used to determine precisely the proper length of the crown post. The gauge is blued for contrast with the white root-end and bright probe.

Price ..... each $0.25

Beutelrock's Nerve Canal Instruments.—Continued.

Patented in America, England, Germany, France, Austria, Switzerland and Italy.

It is claimed that these Nerve Canal Instruments supersede any hitherto introduced, for the following reasons:

1. The instruments are made of a new kind of steel and are not hardened over the fire like others.
2. Their elasticity is so great that they are almost unbreakable, and breakage can only arise as the consequence of misapplied force.
3. The drills remove detached portions of their own accord from the canals, owing to their double cutting form, so that the injurious effect produced by the moving forward of the particles and of the secretions toward the tips of the roots and the walls of the root canals is done away with.
4. The form and the nature of the tempering imparted to the drills render it quite impossible for them to jam under careful handling.
5. They are especially noteworthy for their extreme fine finish, so that after a little practice one can penetrate even the most minute canals with the greatest ease.
6. Owing to their exquisite elasticity and fineness they follow the direction of every nerve canal, even of those which are crooked, so that a piercing of the side walls of the root cannot occur.
7. The efficiency of the drills is astonishingly rapid and sure, so that the drilling out of the canals of a tooth with three fangs can easily be effected in a few minutes.

Fig. a.

Fig's. b & f.

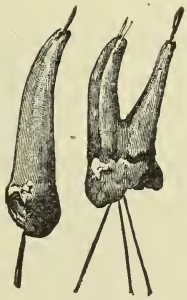


Fig. c. Fig. d.

Fig. e.

Fig. h.

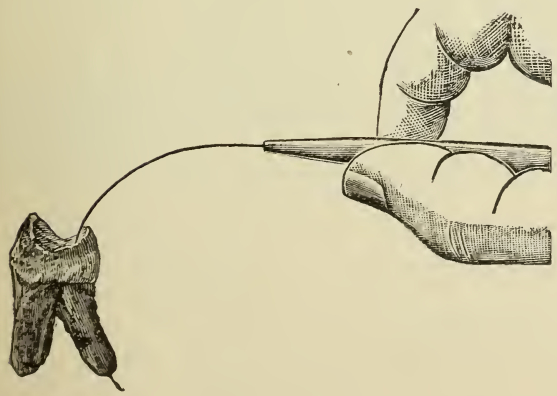


Fig. g.

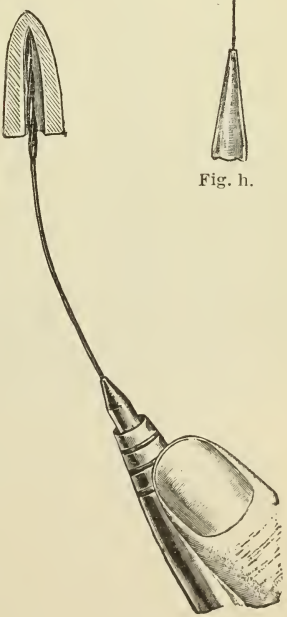


Fig. i.

See prices on page 236.

Beutelrock's Nerve Canal Instruments.—Continued.

8. In spite of the rapidity with which they can be worked these drills do not generate any heat.

9. Their employment in dental operations reduces the time and the trouble hitherto necessary to the drilling out of nerve canals to a minimum.

Fig. A shows how a thick tooth may be drilled through by means of an engine instrument with ease and great accuracy.

Figs. C and F show the flexibility of Hand and Engine Drills.

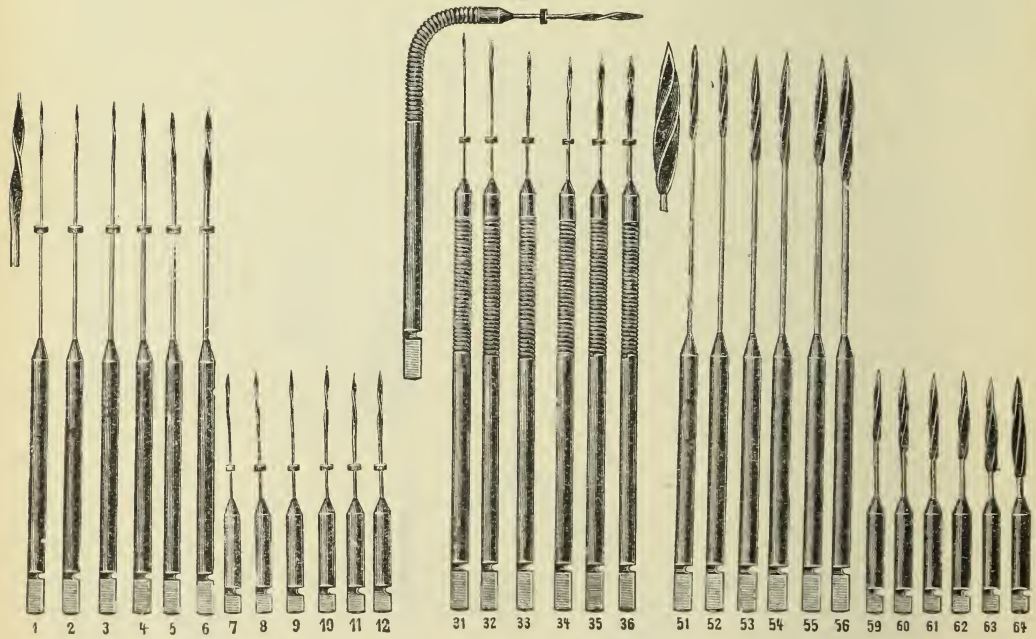
Figs. C and D, E and G show how accurately the Instruments follow the root canal.

Fig. H shows the Nerve Canal Cleanser wrapped with cotton.

A shred of cotton held between thumb and forefinger is securely fastened to the instrument by turning the latter to the right; a turn of the left instantly releases it.

Fig. I shows the Nerve Canal Reamer in use.

The Nerve Canal Reamers are the latest addition to this set of Instruments; they are indispensable for Pivot, Crown and Bridge-Work.

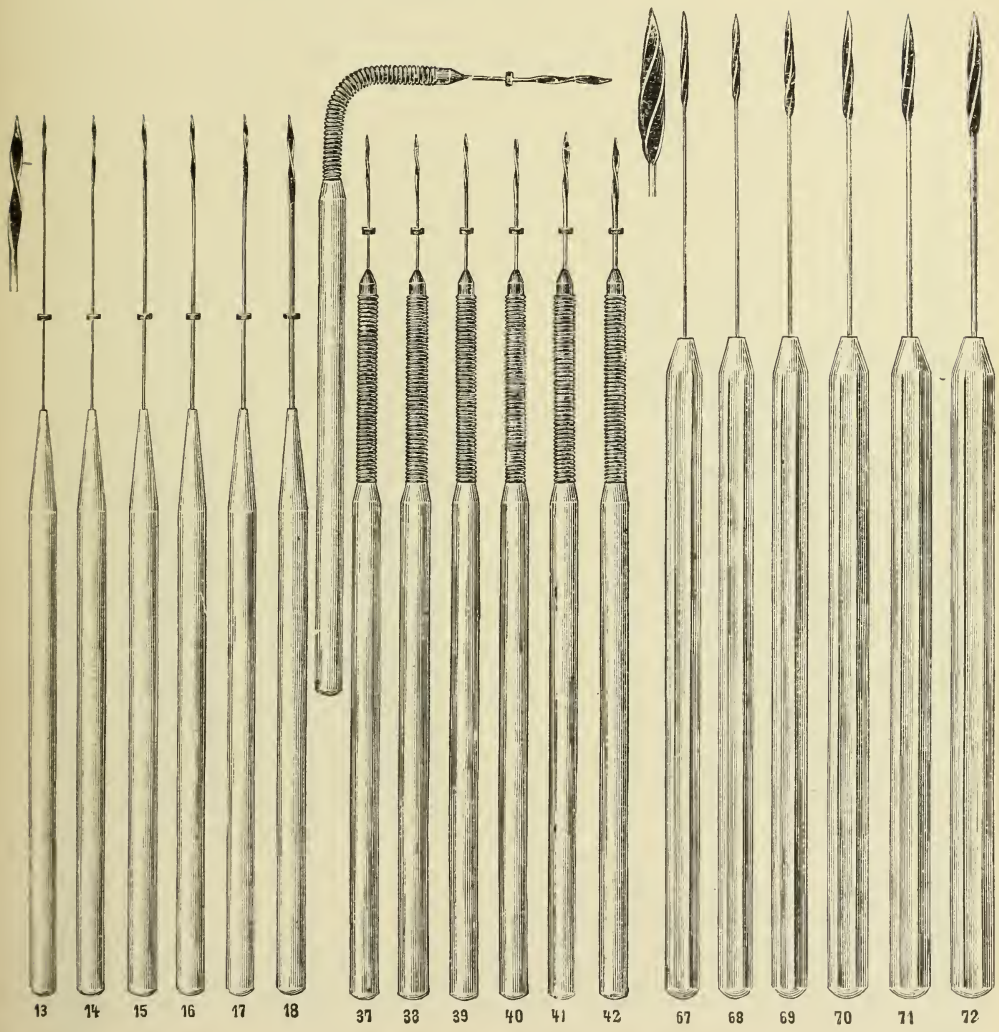


Nerve Canal Drills for Engines Nos. 1 to 12.
Nerve Canal Drills, with flexible stem, Nos. 31 to 36.

Nerve Canal Reamers for Engines Nos. 51 to 56 and 59 to 64.

See prices on page 236.

Beutelrock's Nerve Canal Instruments.

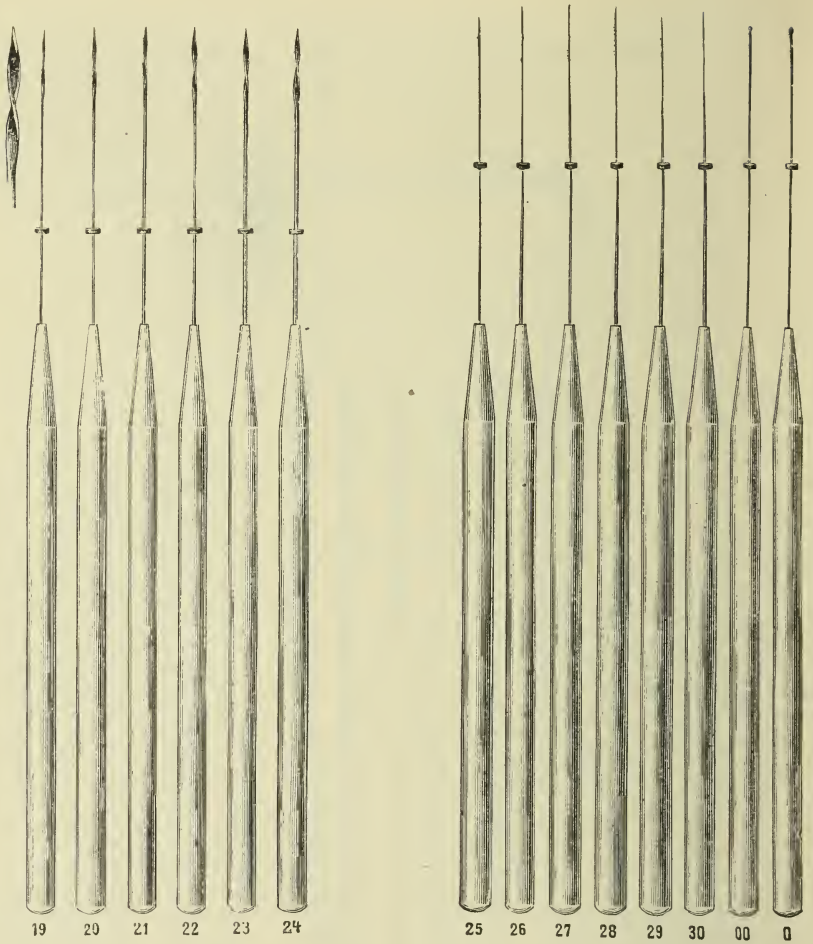


Nerve Canal Drills for Hand, Nos. 13 to 18.
Nerve Canal Drills, with flexible stem, Nos. 37 to 42.

Nerve Canal Reamers for Hand, Nos. 67 to 72.

For prices see page 236.

Beutelrock's Nerve-Canal-Instruments.



Nerve Canal Probes, Nos. 25 to 30.
Fistula Canal Probes, with gold point, Nos. 00 and 0.
Nerve Canal Cleansers, Nos. 19 to 24.

N. B. The handles of the instrument intended for manual use are made of celluloid. so that the whole instrument is elastic, even to its handle. But the celluloid handles must not be sterilized in steam or in boiling, or simmering water, as their forms would be affected and altered thereby.

Nerve Canal Drills for engine No. 1 to 12	each $0 50	Nerve Canal Drills for Hand, No. 13 to 18	each $0 60
" " " with flexible stem, No. 31 to 36	" 75	Nerve Canal Reamers for Hand, No. 67 to 72	" 85
Nerve Canal Reamers for engine, No. 51 to 56 and 59 to 64	" 75	" " Probes, No. 25 to 30	" 60
Nerve Canal Drills for Hand with file ible stem, No. 37 to 42	" 85	Fistula Canal Probes, with Gold Points, No. 00 and 0	" 60
		Nerve Canal Cleansers, No. 19 to 24	" 60

A small set of these Nerve Instruments in Morocco Case, velvet lined, consisting of

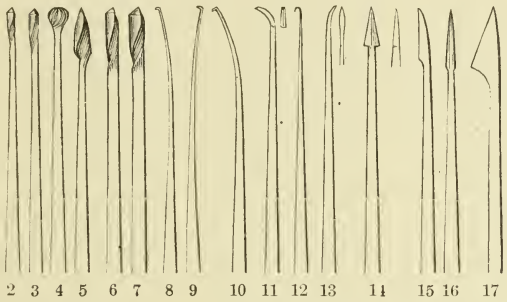
6 Drills for Hand Piece
6 " " R. A. Attachment
3 Hand Drills
2 Nerve Canal Cleansers
1 Nerve Probe

} $8.00

Nerve Instruments.

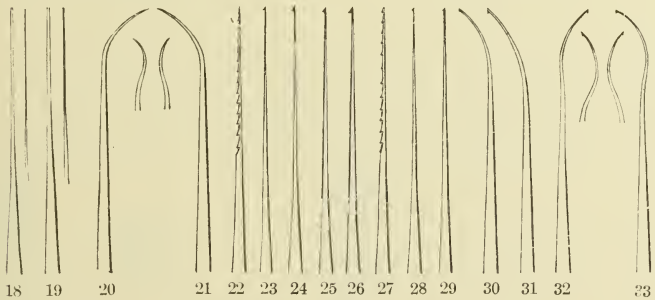
For prices see next page.

Dr. Corydon Palmer's.



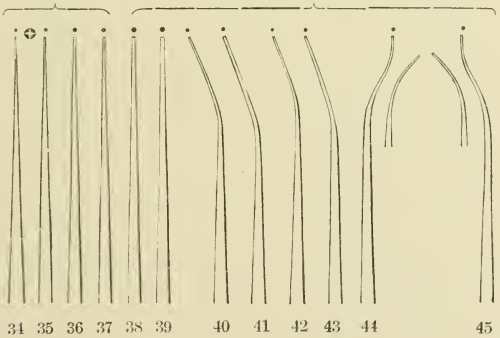
How's. Hunter's. Nerve-Canal Dressers.

Dr. B. F. Arrington's Extractors. Soft. Spring Temper.



Dr. B. F. Arrington's Pluggers.

Soft. Spring Temper.



1

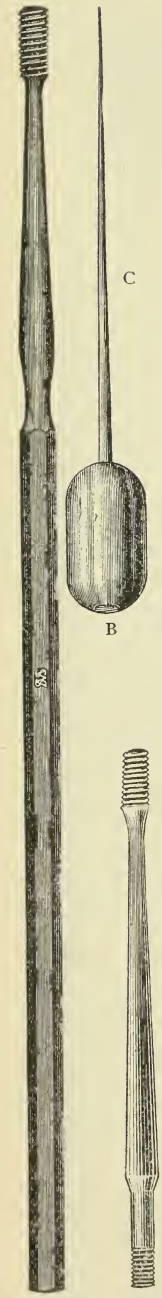
Ligature Cutter.

Suggested by Dr. Garrett Newkirk.

The inner side of the hook has a knife-edge, and the point is made blunt to avoid any risk of wounding the gum or puncturing the rubber-dam, as is likely to occur when a lancet is used to remove a ligature. They are used with the pull-cut.

Price, Octagon Steel Handle.....each $0.35
Cone-Socket Points .....each .25

Nerve Instruments.



Root drier.

Gates Drills.

Flexible or Drawn Temper.

Inflexible or Spring Temper.

Improved Gates-Glidden Drills.

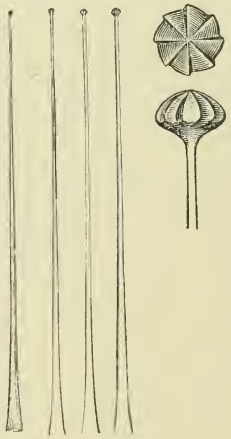
Flexible or Drawn Temper.

Inflexible or Spring Temper.

	Light Steel Octagon Handles.	Cone-Socket Points.
Nos. 1 to 7	each $0.45	$0.40
" 8 " 13	" .30	.25
" 14 " 17	" .40	.35
" 18 " 51	" .25	.20
" 52 " 57	" .40	.35

Nos. 18 to 19 Iriodio-Platinum, knurled handle, each $1.50.

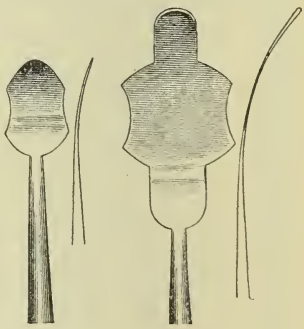
Littleton's Root Canal Drills.



Spring tempered, light steel handle, each..$0.40

Set of four 1.50

Gum Depressors.



These instruments are designed especially for depressing the gum in the interdental spaces to enable the operator to fix the rubber-dam below deep approximal cavities.

Price, No. 1.....$0.30

Price, No. 2..... .40

Evan's Root-Drier.

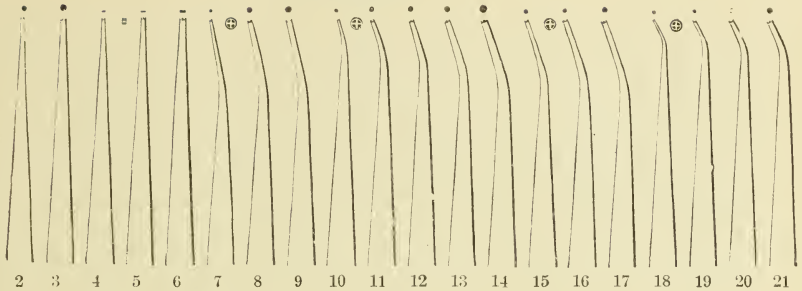
PRICES.

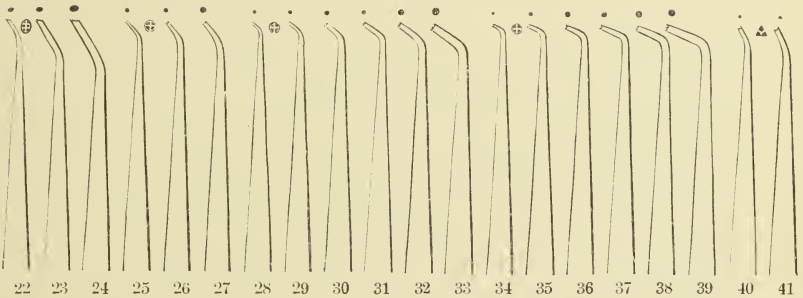
Complete, Silver Probe, Copper Bulb and Steel Handle.....$1.75

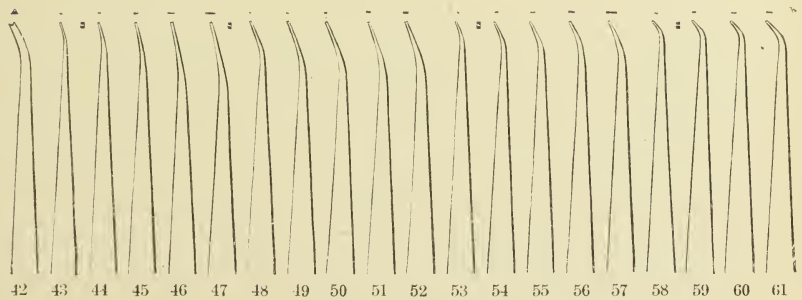
PARTS SEPARATELY.

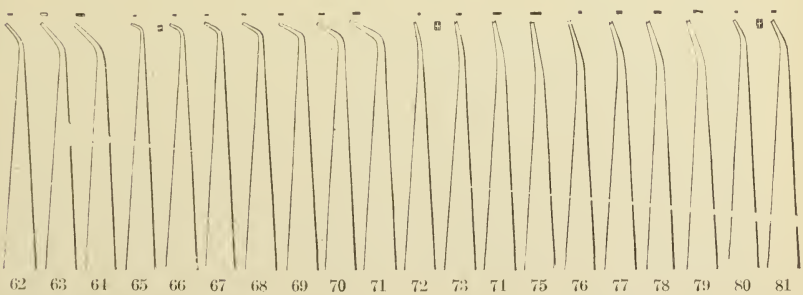
Steel Handles	each $0.45
Cone-Socket Handle Attachment (see A)	.35
Copper Bulbs	each .45
Silver Points	each .85

Pluggers.





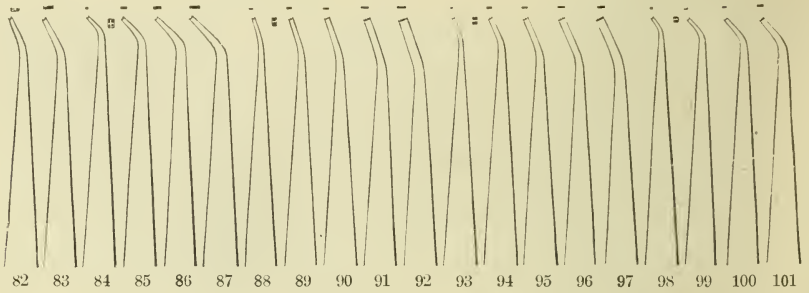


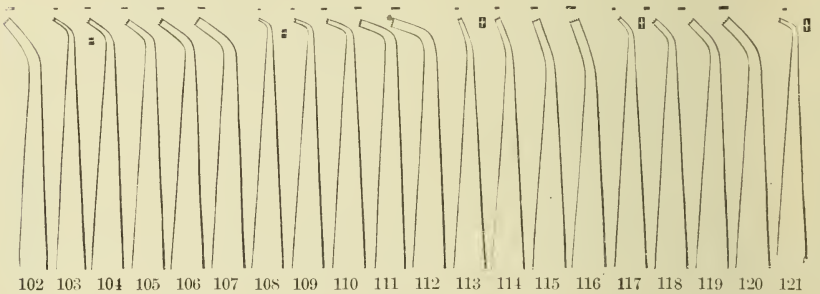


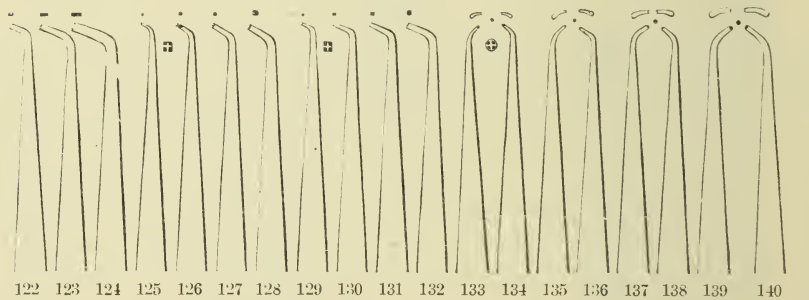
PRICES.

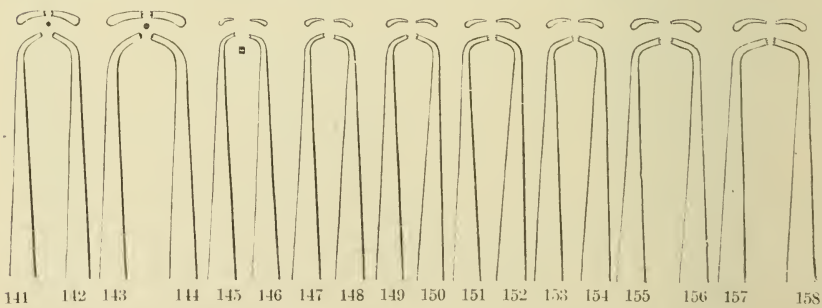
Taper-end File-cut Handles.....each $0.50
Cone-Socket Points .....each .35

Pluggers.





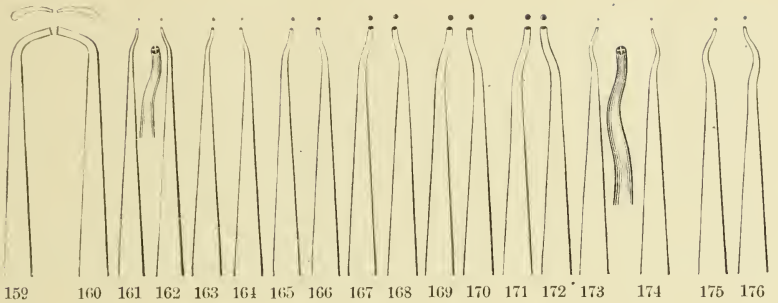


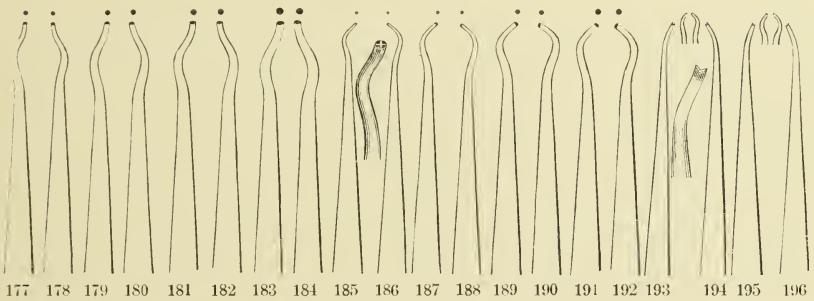


PRICES.

Taper-end File-cut Handles.....each $0.50
Cone-Socket Points .....each .35

Pluggers.

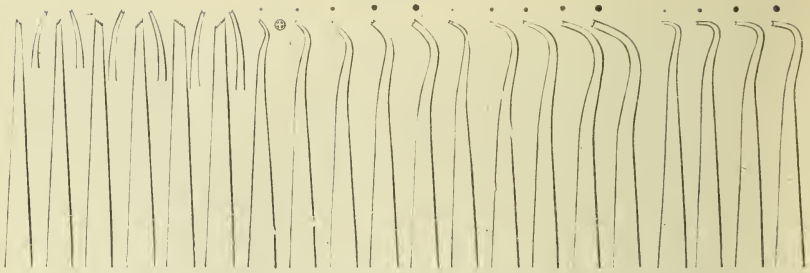


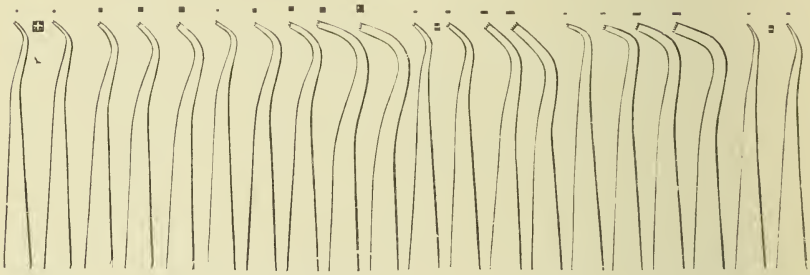


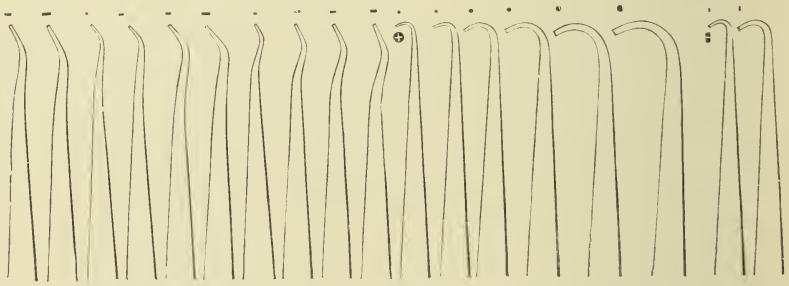
PRICES.

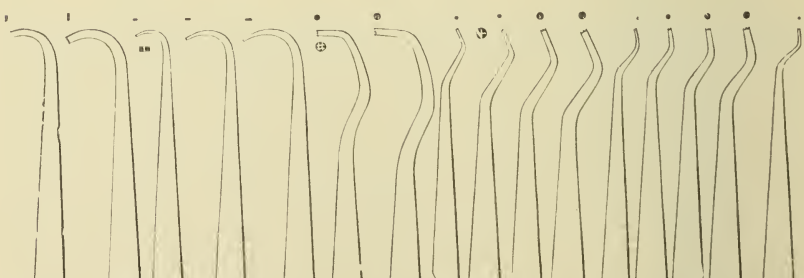
Taper-end File-cut Handles.....each $0.50
Cone-Socket Points .....each .35

Pluggers.





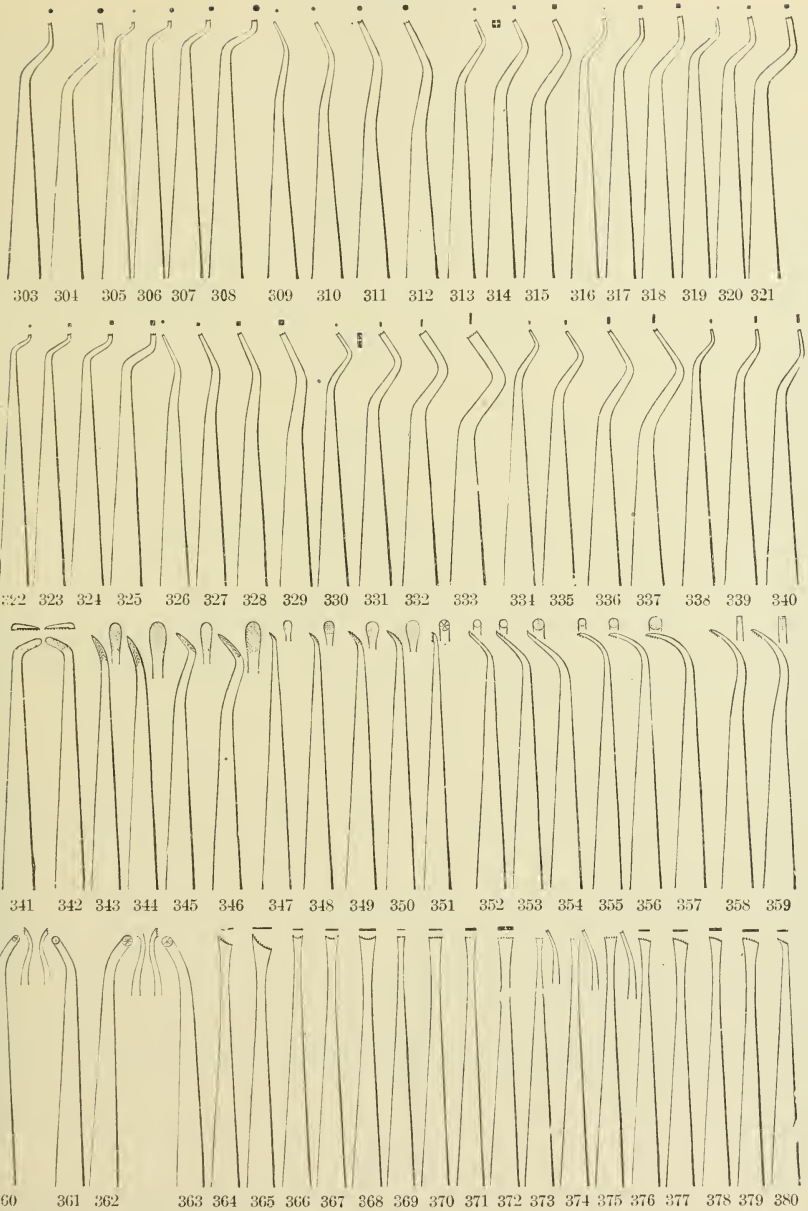




PRICES.

Taper-end File-cut Handles	each $0.50
Cone-Socket Points	each .35

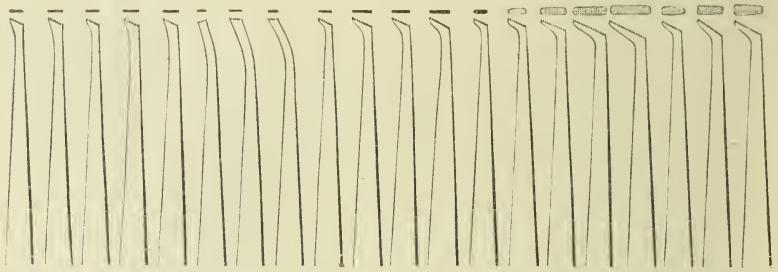
Pluggers.

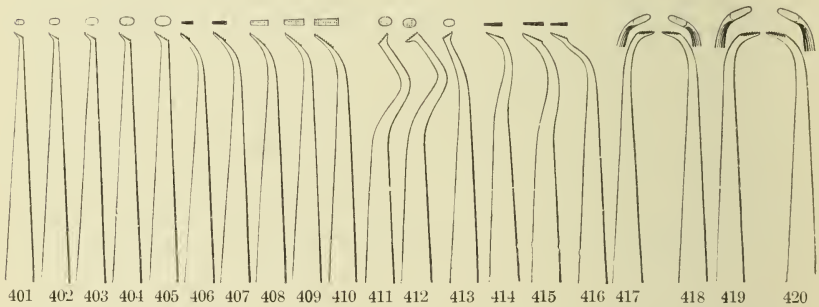


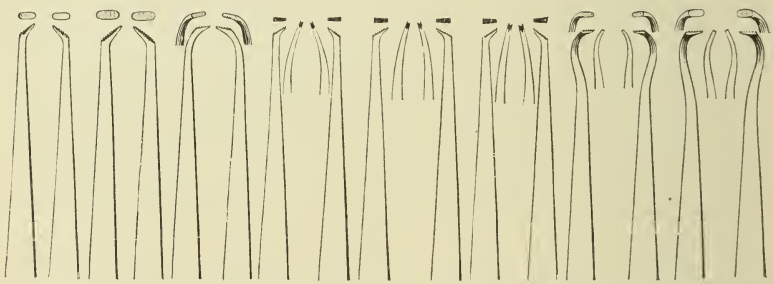
PRICES.

	Taper-end File-cut Handles.	Cone-Socket Points.
Nos. 303 to 342	each $0.50	$0.35
" 343 and 344	" 1.00	.85
" 345 and 346	" .75	.60
" 347 to 350	" 1.00	.85
" 351	" .50	.35
" 352 to 359	" .75	.60
" 360 to 380	" .50	.35

Pluggers.





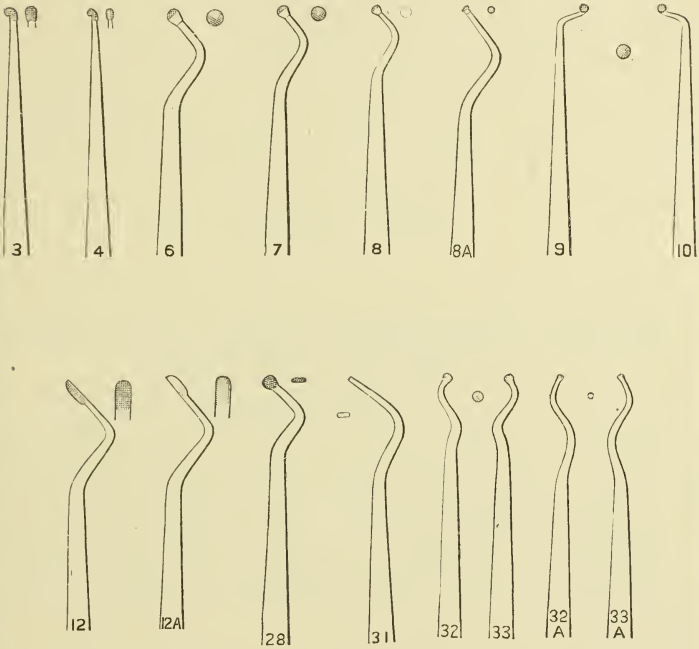


PRICES.

	Taper-end File-cut Handles.	Cone-Socket Points.
Nos. 381 to 390	each $0.50	$0.35
" 391 to 394	" .60	.45
" 395 to 400	" .75	.60
" 401 to 405	" .60	.45
" 406 to 410	" .75	.60
" 411 to 414	" .60	.45
" 415 to 426	" .75	.60
" 427 to 432	" .50	.35
" 433 to 436	" .75	.60

Hand Pluggers for "Solila" Gold.

Handle No. 1.



Handle No. 2.

"Solila" Gold may be condensed entirely by hand if sufficient pressure is used, but to secure the very best results special instruments should be used.

The above pluggers were manufactured expressly for working "Solila," and their success has been instantaneous; 14,000 instruments were sold during the first year.

The following numbers were selected by a leading Philadelphia dentist:

Numbers 3, 4, 6, 7, 8, 9, 10, 12, 12A, 31, 32 and 33. They form a most convenient set.

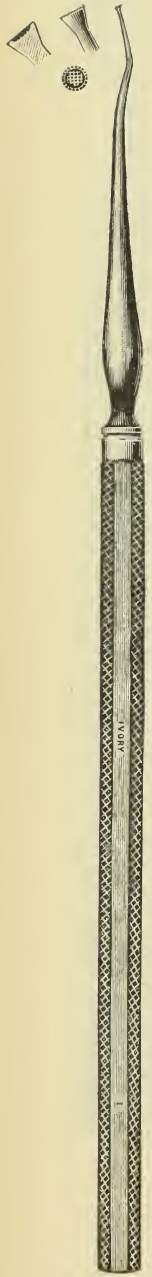
PRICES.

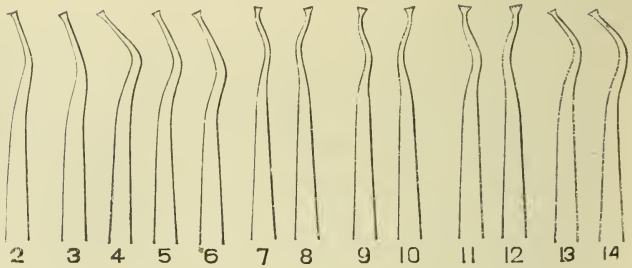
Hand Pluggers, Handle No. 1, Nos. 3, 6, 7, 12, 12A, 28, 31, 32, 33, 32A, 33A	each	$1.50
Hand Pluggers, Nos. 4, 8, 8A, 9, 10	each	1.25
Hand Pluggers, Handle No. 2, any number	each	1.50
Cone-Socket Points, Nos. 3 to 33A	each	1.00

E. deTrey & Sons,

3943 Locust Street, Philadelphia, Pa.

Ivory's Gold Pluggers.





Patented February 23d, 1897.

The above set of Pluggers has been devised to meet a demand for better Gold Filling Instruments.

DESCRIPTION.

They are fashioned after the Royce Pluggers in the different bends and angles, though in the formation of the serrated points they are almost the very opposite—as these, instead of being oval faced, have a depressed center, with serrations peculiarly formed in the bottom of this center (which is the patented feature) surrounding this center is a lip or rim of fine pointed serrations. These serrations are cut from without inwards and are in style somewhat after the Royce Plugger in this particular.

The depressed or cup shape prevents the Plugger from being driven into the gold, preventing the splitting of enamel walls and the spreading and pitting of the gold where it is not desired. An instrument that is best adapted for filling teeth will build the gold in the exact place in which it is placed, not spread the gold away from, but directly and uniformly against the face or wall on which it is working, building the filling at that point and that place only, at the same time not breaking up or unnecessarily pitting the mass already in the cavity or forcing and spreading away from the enamel walls.

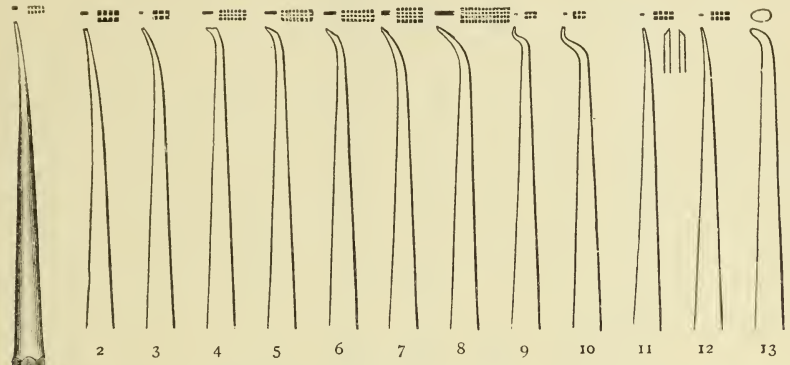
To sum up, the advantages are: For contouring gold, there is no Plugger to compare with these; for picking up the gold, no tweezers were ever constructed to do the work better; for condensing the gold evenly and at the point desired; for rapidity of filling teeth, there is none equal.

In every conceivable way this Plugger is adapted for the work of filling teeth with gold, and that better than by any instrument previously brought to the attention of the profession.

PRICES.

Long Handle	each	$0.65
Cone-Socket	each	.50
Snow & Lewis	each	.50
Set of 14, Long Handle		7.60
Set of 14 C. S. or Automatic Point		6.00

Dr. R. W. Varney's Set of Pluggers.



Since the introduction of Dr. Varney's set of 13 Pluggers—nearly thirty years ago—they have had steady and increasing sales.

The cause of their enduring popularity is not far to seek. In their field they have never been surpassed, if indeed they have been equaled. No better evidence of Dr. Varney's perfect understanding of the technique of cohesive gold working could be required than is afforded by the story of these instruments.

This other factor must be reckoned in the account. Dr. Varney gave us permission to copy his instruments for the benefit of other dentists only on condition that we guarantee to make every set as though intended for his own use.

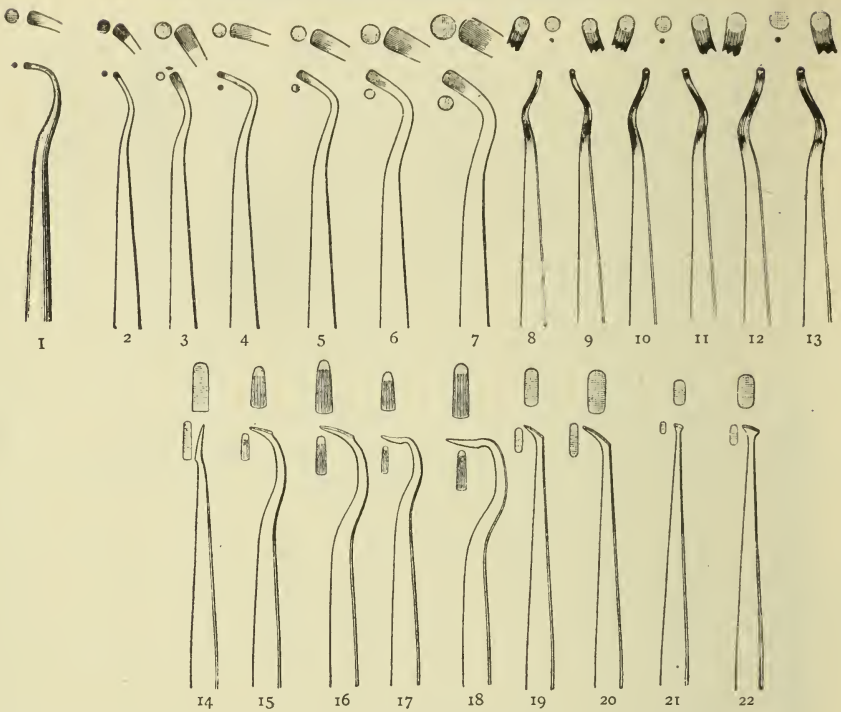
That guaranty is still worth its face value. Every set is made to-day as carefully as the first one was. Really the buyer of Varney Pluggers to-day gets better instruments than those who bought them in the early seventies. Steels have improved, and we know steels, and the buyer gets the benefit of the improvement through our knowledge.

The full-length cut shows the general style. Made of the finest steel, with extreme care in forming and serrating. Tempered all over. Smooth octagon shaft, nickel-plated. The cuts show the size and bends, but the serrations are too fine for illustration.

PRICES.

	Long Handle.	Cone-Socket Points.
Per set of 13	$17.50	$14.25
SEPARATELY.		
Nos. 1 to 3	each $1.15	$0.90
" 4 to 7	" 1.50	1.25
" 8	" 1.75	1.50
" 9 to 12	" 1.50	1.25
" 13	" .60	.35
Morocco Case for complete set, with space for each instrument		$3.00

Moss Fibre Gold Pluggers.



Made only for Cone-Socket Handles and especially for No. 12, page 205.

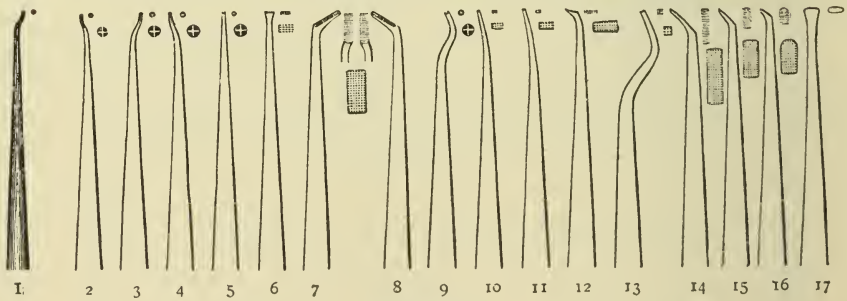
PRICES.

Complete set of 22 Points, without Handles.....$27.50

SEPARATELY.

Nos. 1, 2, 8, 9.....each	$0.90	No. 6 .....each	1.50
Nos. 10, 11, 21.....each	1.00	Nos. 14, 16, 18, 20.....each	1.75
Nos. 3, 4, 15, 17.....each	1.10	No. 7 .....each	2.00
Nos. 5, 12, 13, 19, 22.....each	1.25		

Dr. J. A. Watling's Revised Set of Pluggers.



PRICES.

	Long Handle.	Cone-Socket Points.
Per set of 17.....	$16.75	$12.50
SEPARATELY.		
Nos. 1, 2, 3, 4, 5, 6, 9, 10, 11, 13.....each	$ 0.75	$ 0.50
No. 12..... "	1.00	.75
Nos. 15, 16..... "	1.25	1.00
Nos. 7, 8, 14..... "	1.75	1.50
No. 17..... "	.60	.35

Chappell's Gold Builders.

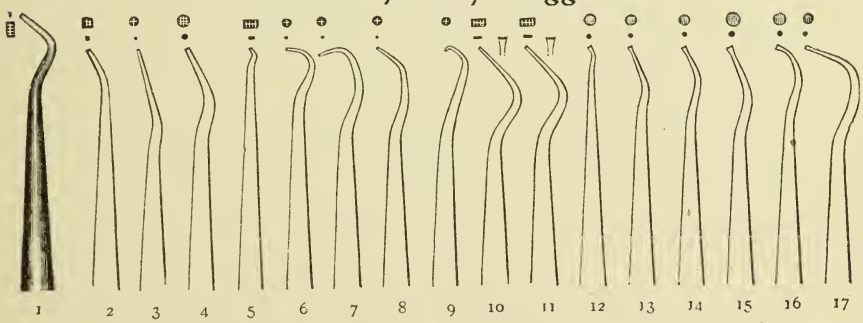
PRICES.

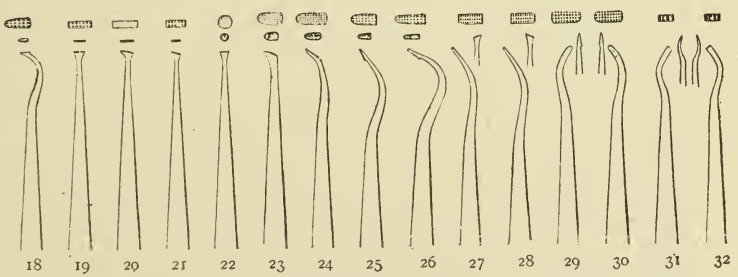
	Long Handle.	Cone-Socket Points.
Per set of 13	$17.50	$14.25

SEPARATELY.

	Long Handle.	Cone-Socket Points.
Nos. 1, 2 ..... each	$ 1.00	$ 0.75
" 3 to 8 ..... "	1.50	1.25
" 9 .... "	1.75	1.50
" 10 .... "	2.00	1.75
Nos. 11 ..... each	$ 1.75	$ 1.50
" 12, 13 .... "	.60	.35
Morocco Case for complete set, with space for each instrument	3.00	

The Darby-Perry Pluggers.





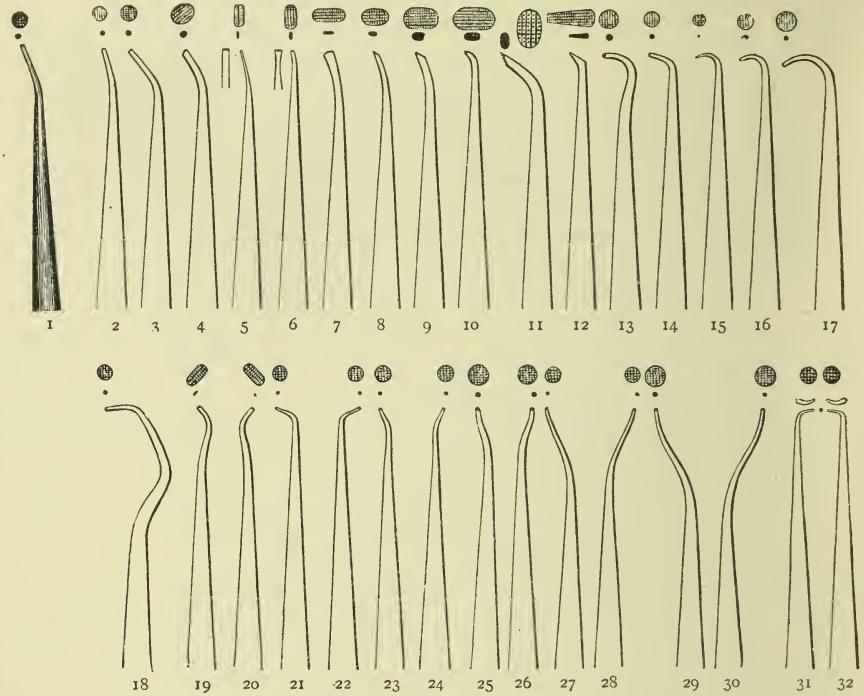
PRICES.

	File-Cut Taper Handles.	Cone-Socket Points.
Per set of 32	$23.00	$15.00

SEPARATELY.

	File-Cut Taper Handles.	Cone-Socket Points.
Nos. 1, 2, 3 ..... each	$0.60	$0.35
" 4 .... "	.75	.50
" 5 to 11 ..... "	.60	.35
" 12 to 18 ..... "	.75	.50
" 19 .... "	.60	.35
Nos. 20 .... each	1.00	.75
" 21, 22 .... "	.75	.50
" 23 to 26 ..... "	1.00	.75
" 27 to 30 ..... "	.75	.50
" 31, 32 .... "	.60	.35

Harvard Pluggers.



PRICES.

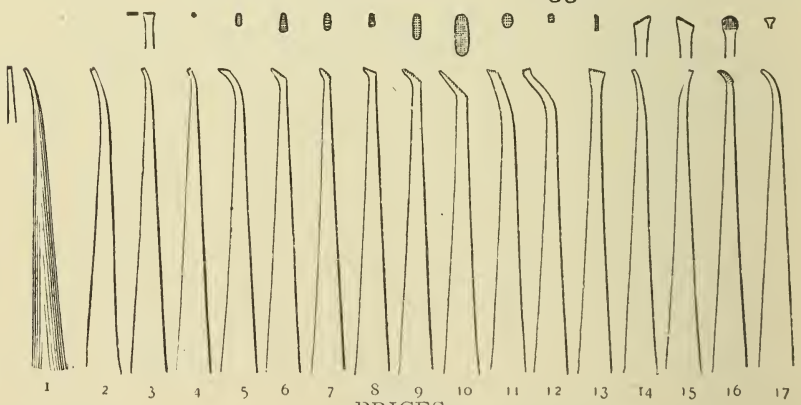
Per set of 32.....$36 00

SEPARATELY.

Nos. 1, 2, 3, 5, 11, 14, 15, 16, 17..... each $1 00
" 19 to 32..... " 1 10
" 4, 6, 7, 8, 9, 13, 18,..... " 1 25
No. 10,.....each $1 50
" 12..... " 1 75

Made only on Octagon Ball-end Handles.

Dr. C. R. Butler's Set of Pluggers.



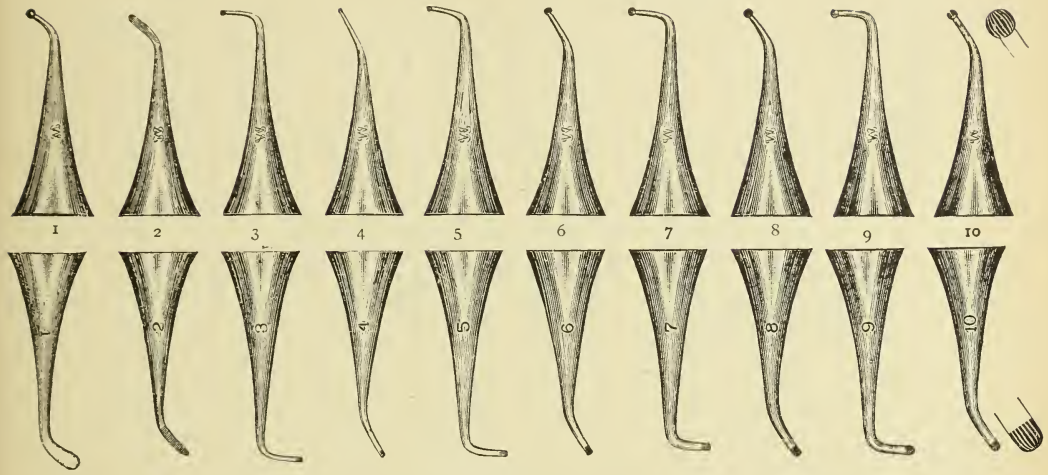
PRICES.

Per set of 17, Long Handle.....$13 25
Per set of 17, Cone-Socket Points.....$ 9 00

SEPARATELY.

	Long Handle.	Cone-Socket Points.
Nos. 1, 2, 4, 17.....	each $0 60	each $0 35
" 3, 11, 13, 14, 15.....	" 75	" 50
" 5, 6, 7, 8, 9, 12.....	" 85	" 60
No. 10.....	each $1 00	each $0 75
" 16.....	" 1 25	" 1 00

Barker Pluggers.



These pluggers are shaped like the bur that shapes the cavity. They are permanently mounted upon a solid ebony handle of the same diameter as the widest part of the shank shown. The handles, exclusive of points, measure 4⅞ inches. The instruments are especially for use in hand pressure.

Retaining-pits are often imperfectly filled. The special value of these points is in adapting the gold to the periphery of the retaining-pit, groove, or cavity walls. After the filling becomes flat, any other forms may be used if desired.

Price, Nos. 1, and 3 to 10	each	$ 2.00
Price, No. 2		3.25
Price	per set of ten	21.00

Bing's Soft Gold or Tape Pluggers.

Made only on taper Ebony Handles, graded to correspond with the size and use of point.

PRICES.

Per set of 21		$18.50
No. 0	each	1.25
Nos. 1, 2, 16	"	1.00
" 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15	"	.90
" 3, 5, 17, 18, 19, 20	"	.75

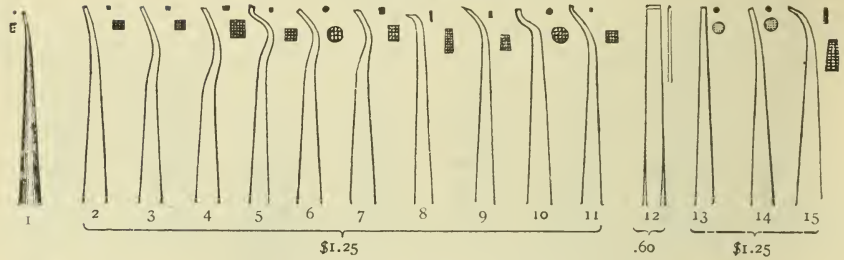
Dr. Louis Jack's Matrices and Matrix Pluggers.

PRICES.

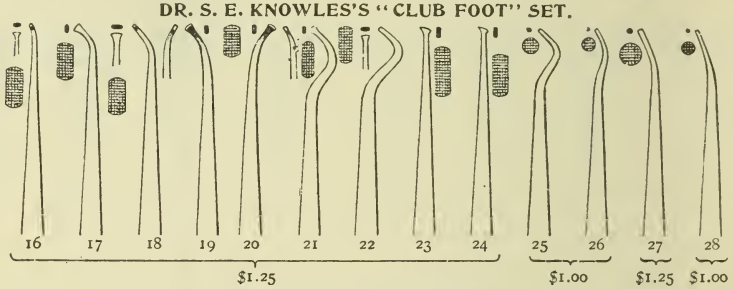
Complete set, 10 Pluggers, 14 Matrices, and 1 pair Pliers		$14.00
Matrices	per set of fourteen	4.50
Separately, Nos. 1 and 2, Right or Left	each	.15
Separately, Nos. 3 to 7	"	.40
Pluggers	"	.75
Pliers, Nickel-plated	per pair	2.25

Fine Pluggers for the Electric Mallet.

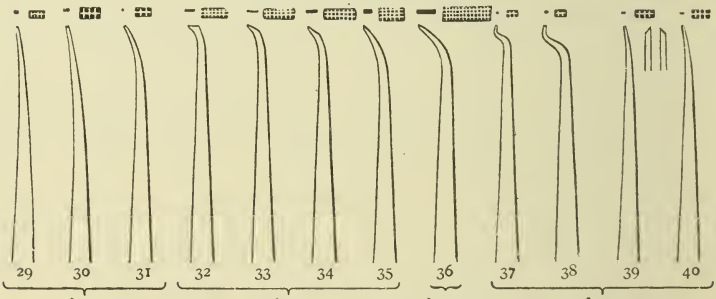
DR. M. H. WEBB'S SET.



DR. S. E. KNOWLES'S "CLUB FOOT" SET.

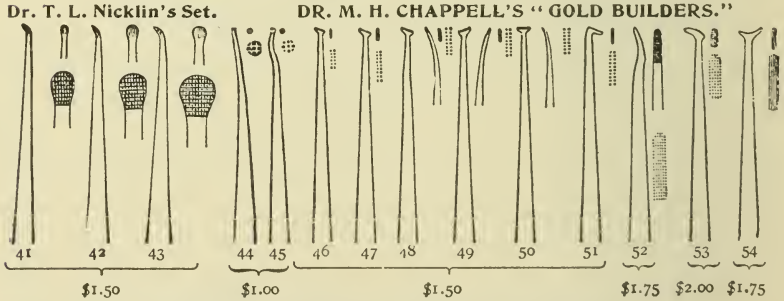


DR. R. W. VARNEY'S SET.

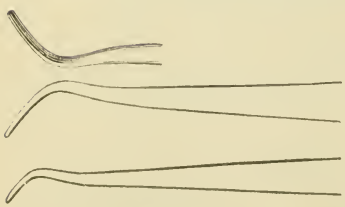


Dr. T. L. Nicklin's Set.

DR. M. H. CHAPPELL'S "GOLD BUILDERS."



Universal Approximal Instruments for Plastics.



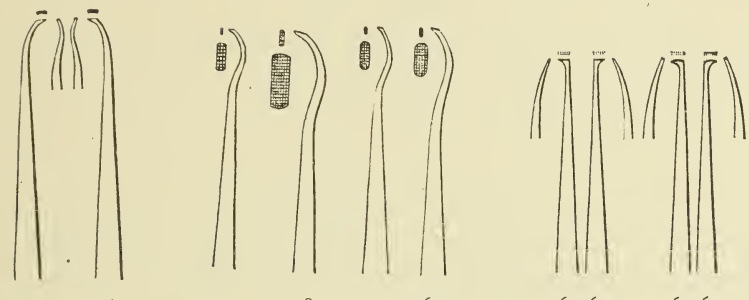
It is particularly effective in condensing or compressing to place pellets of amalgam or gutta-percha, and especially for contouring the surfaces of these materials—for the latter of which it is, of course, to be warmed. It will also be found useful in the adjustment of ligatures under the gingival margins of molars and bicuspids for retaining the rubber-dam, or, as an ordinary burnisher, for approximal gold fillings.

PRICES.

Cone-Socket Point .....35 cents. Octagon Handle, ball end.....50 cents.

Pluggers.—Continued.

Dr. T. S. Waters'. Dr. E. Parmly Brown's. Dr. H. J. McKellops'.

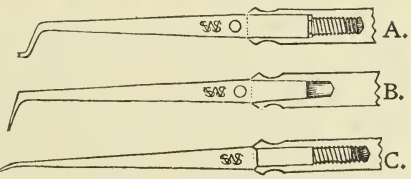


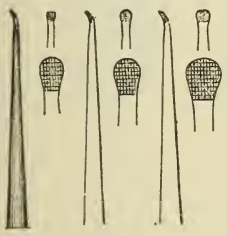
$1.50 $1.75 $1.50

Socket Handles.

Each 75 cents.

"A," Socket for Snow & Lewis Plugger Points.
"B," Socket for Salmon Plugger-Points.
"C," Socket for Cone-Socket Plugger-Points.





Nicklin Modification Pluggers.

These three Pluggers are modified forms of the well-known No. 16 of Butler's mallet set. They have the Varney style of handle. The modifications in sizes and serrations were suggested by Dr. T. L. Nicklin.

Price, Steel Handles, Nickel-plated.....each $1.50
Price, Cone-Socket Points.....each 1.25

Webb's Right and Left Ebony Handle Pluggers.

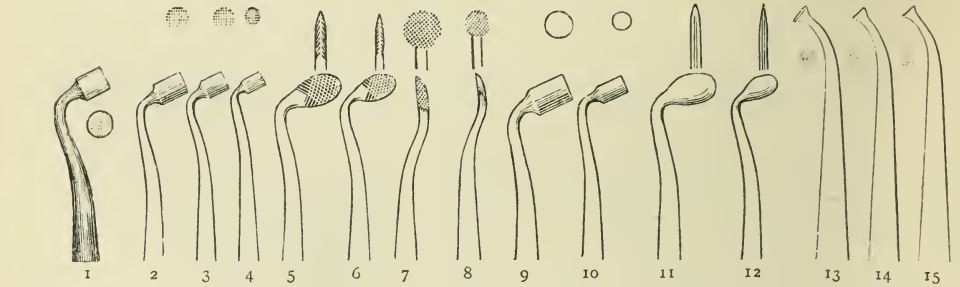
Made only on Ebony Taper Handles, with Corkscrew Right and Left Points.
Price .....each $0.75
We haven't them in stock for Cone-Socket Handles.

Double-End Plugging Assistant.

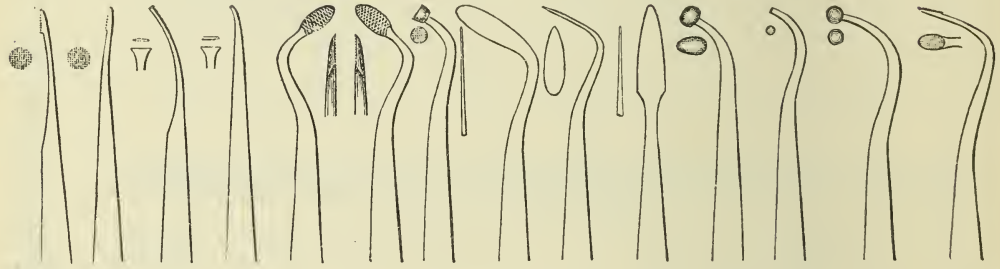
The peculiarity and merit of this Double-End Assistant lies in very ingenious curves of the ends, which on reversal will lean to opposite sides, and so hold a pellet without interfering with the Plugger or obstructing the sight. Made only on Round Steel Handles.

Price $0.60
Not made for Cone-Socket Handles.

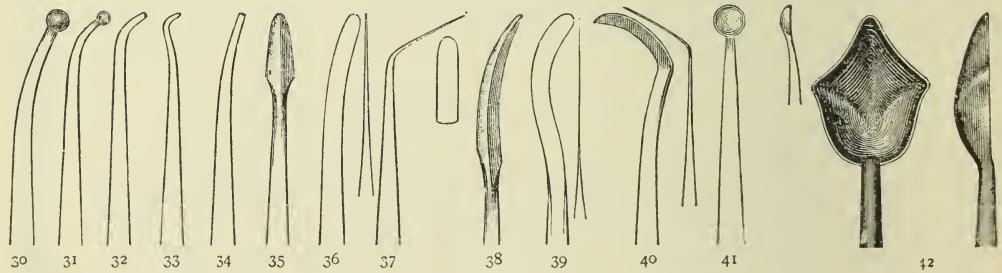
Amalgam, Gutta-Percha and Plastic Filling Instruments.



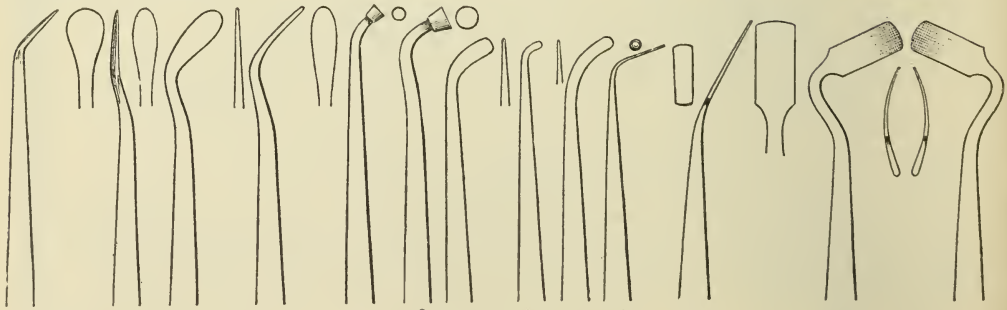
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Long Handle—	60c	60c	60c	60c	60c	60c	60c	50c	50c	50c	50c	50c	60c	60c	60c
C. S. Points—	45c	45c	45c	45c	45c	45c	45c	35c	35c	35c	35c	35c	45c	45c	45c



	16	17	18	19	20	21	22	23	24	25	26	27	28	29
Long Handle—	60c	60c	50c	50c	60c	60c	60c	50c	50c	50c	50c	50c	50c	60c
C. S. Points—	45c	45c	35c	35c	45c	45c	45c	35c	35c	35c	35c	35c	35c	45c

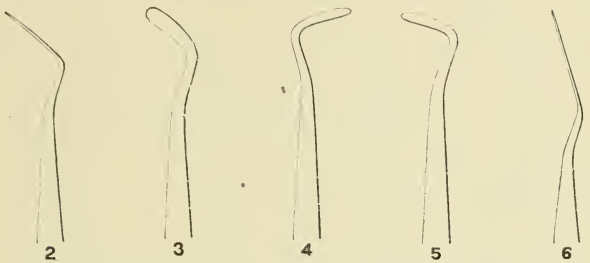


	30	31	32	33	34	35	36	37	38	39	40	41	42
Long Handle—	50c	50c	40c	40c	40c	50c	40c	50c	50c	50c	50c	50c	.....
C. S. Points—	35c	35c	25c	25c	25c	35c	25c	35c	35c	35c	35c	35c	50c



	43	44	45	46	47	48	49	50	51	52	53	54	55
Long Handle—	.....	.....	.....	.....	.....	.....	50c	50c	50c	50c	50c	50c	50c
C. S. Points—	35c	35c	35c	35c	35c	35c	35c	35c	35c	35c	35c	35c	35c

Dr. G. T. Greggs' Set of Six Plastic Instruments.

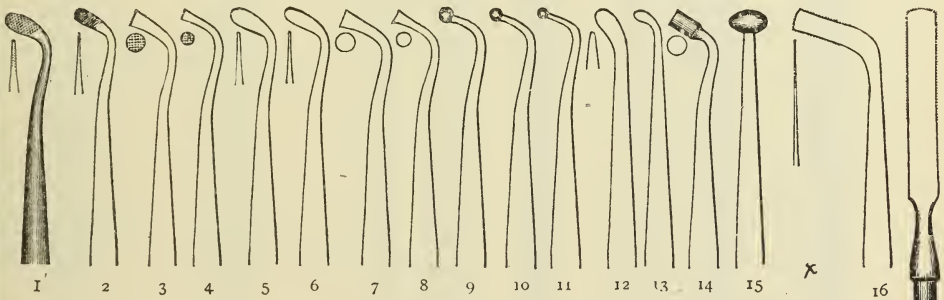


Set of Six Plastic Instruments designed by Dr. G. T. Gregg.

The various forms and shapes of this set of plastics, their oval, yet thin surfaces, their advantageous curves suited for use in the most difficult places have assured a sale for this particular set of gutta percha and plastic instruments that has already substituted other forms and patterns long popular with the profession.

Price set of six $2.00
Price each 0.35

Dr. B. F. Arrington's Revised Set of Amalgam Intsruments.

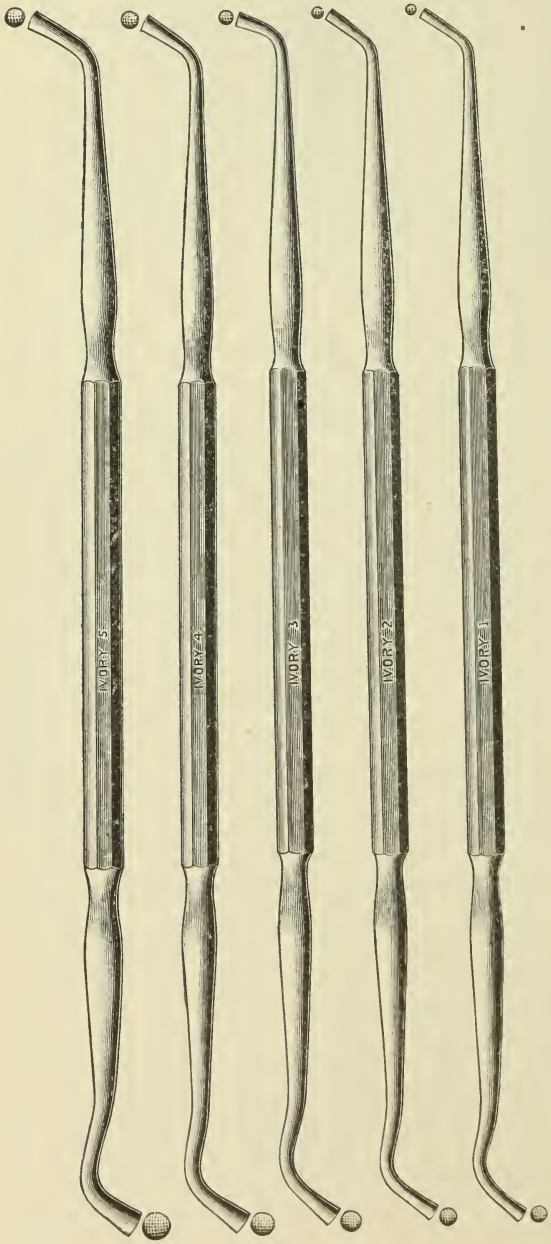


This set of seventeen instruments is complete for the working of amalgam and gutta-percha, representing the matured conclusions of thirty-five years' practical experience and careful observation, reinforced by constant study and experiment.. The method of using amalgam is to carry it to the cavity with a serrated conveyor and condense with smooth-surface instruments or burnishers. The set will be found to contain points suited for all sizes of cavities. Made as points for Cone-Socket Handles and as Long-Handle Instruments.

PRICES.	Long-Handle Instruments.	Cone-Socket Points.
Per set of 17	$8.75	$6.25
Nos. 1, 2, 3, 4	each $0.60	$0.45
Nos. 5 to 17	" .50	.35

Ivory's Set of Five Amalgam Carriers and Pluggers.

Patented February 23d, 1897.



The advantage in these Instruments is in the Serrated Cup Depressions enabling the operator to carry the Amalgam to the most difficult cavities and pack into the tooth with the one Instrument.

Also nice for Gutta Percha.

We will make special instruments for canal work.

Price.....$4.50

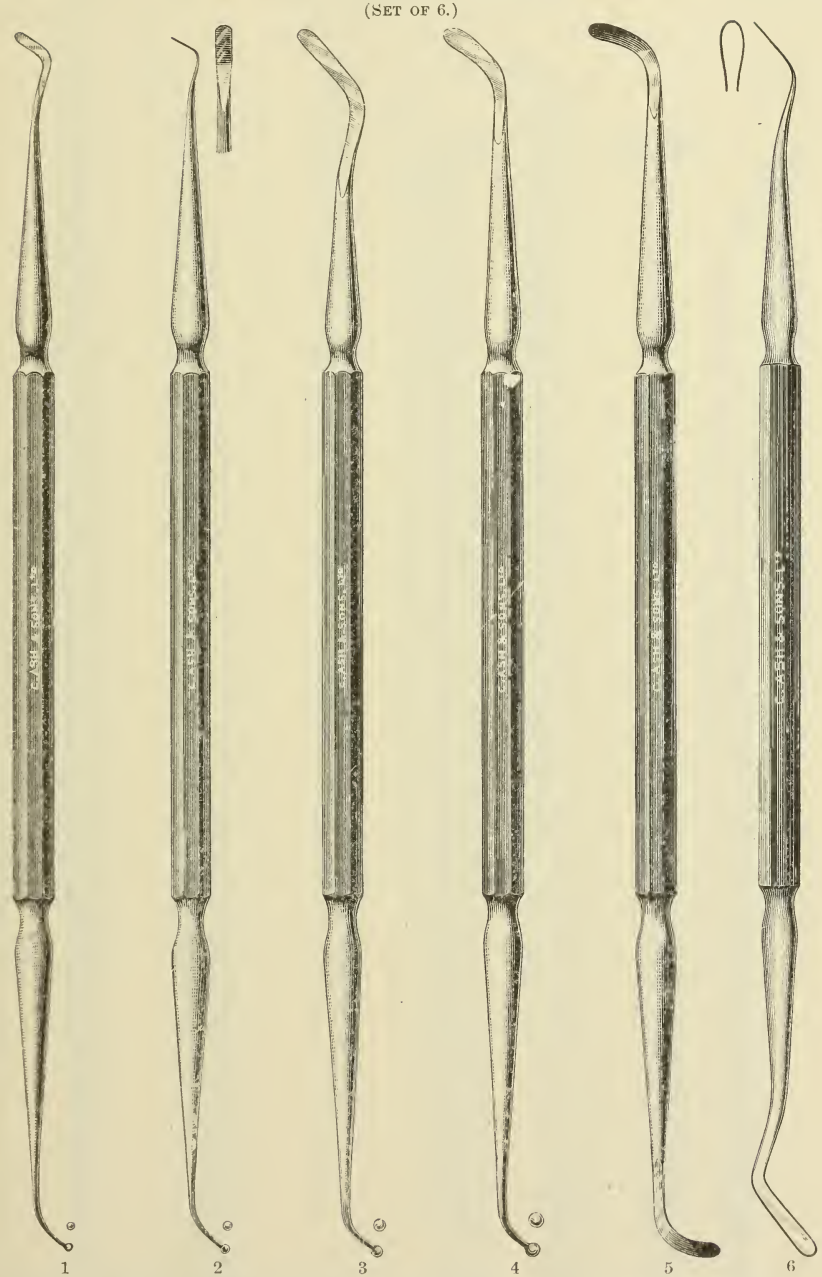
Per set of Five as above.

Each $1.00

"Special" Plastic Filling Instruments.

Made by C. Ash & Sons, Ltd.

(SET OF 6.)

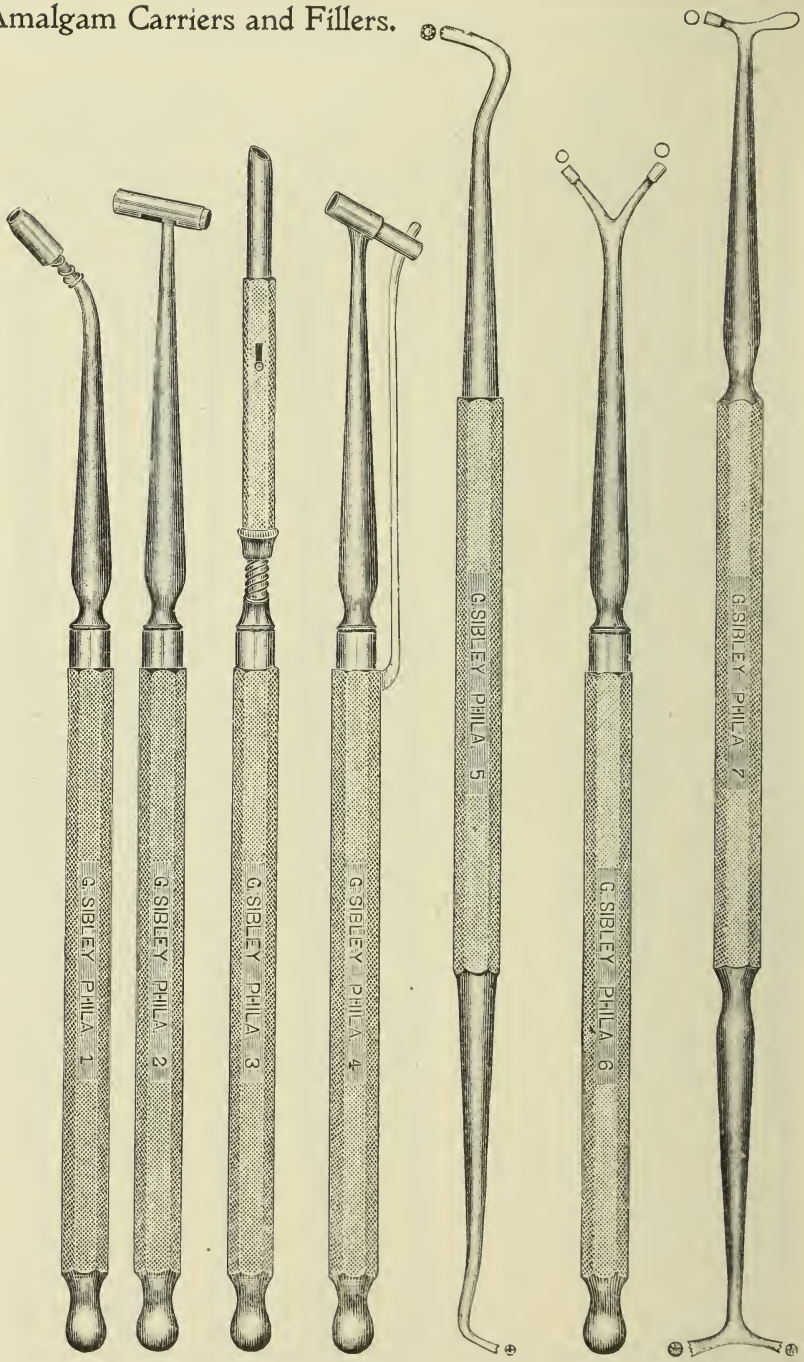


1 2 3 4 5 6

Figs. 1 and 2 are small Spatulas and Burnishers for filling small cavities in all parts of the mouth.
Figs. 3 and 4 are Spatulas and Burnishers. These are useful for general plastic filling.
Fig. 5 is a right and left Packer and Trimmer. Particularly useful for filling distal cavities in bicuspids and molars.
Fig. 6 is a double-ended Spatula with thin blades set at very useful angles.

Prices, In N. P. octagon handles (figs. 1—6).....$0.75 each.
" N. P. for Cone-Socket handles..... 35 "

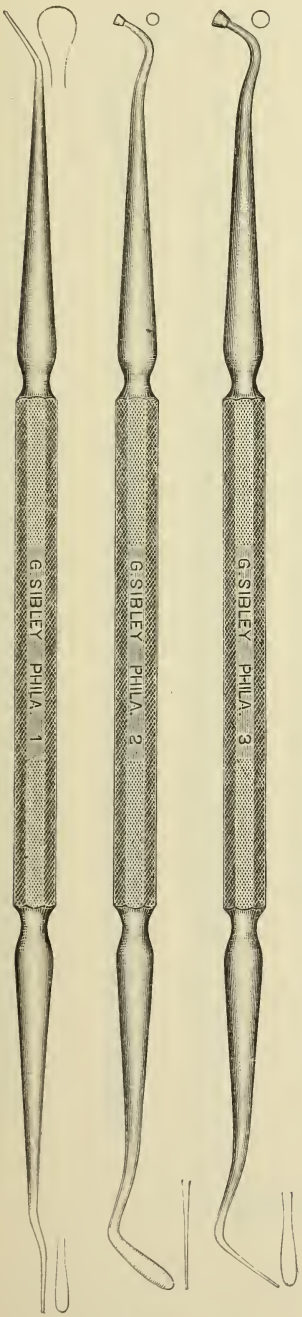
Amalgam Carriers and Fillers.



PRICES.

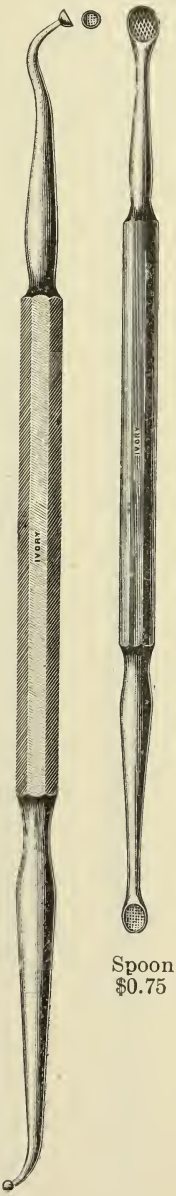
No. 1	$1.00	No. 4	$2.00
" 2	1.00	" 5	.75
" 3	1.25	" 6	.75
		" 7	1.50

Woodson's Double-end Amalgam Instruments.



Price, each $0.75

Ivory's Amalgam Carrying Plugger and Spoon.



Carrier, $1.00

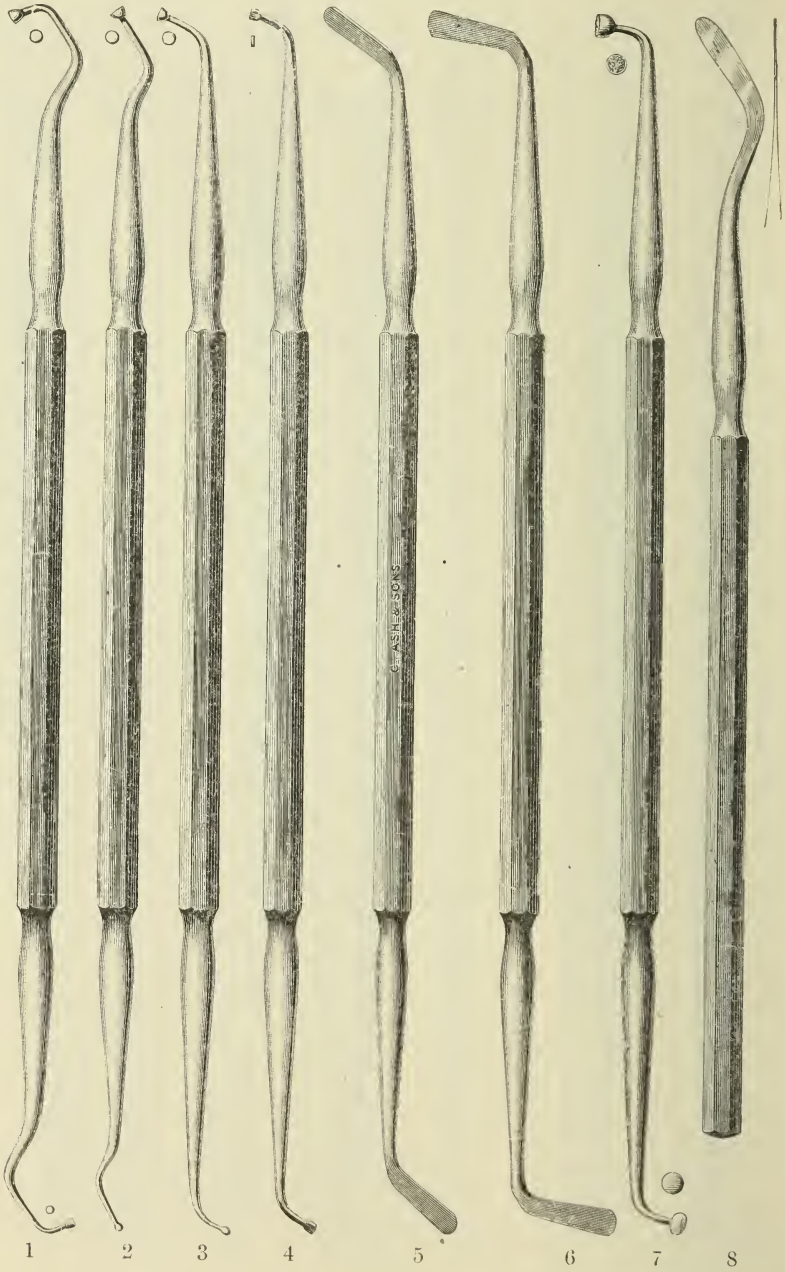
Spoon $0.75

Spoon Amalgam Carrier No. 9.

$0.60

Ladmore's Plastic Filling Instruments.

(Mr. E. J. Ladmore's)
Made by C. Ash & Sons, Ltd.



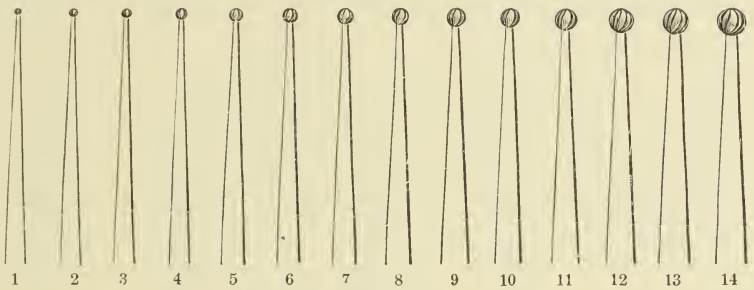
1 2 3 4 5 6 7 8

Price, figure 1 to 7..... each $0 75
" " 8..... " 40

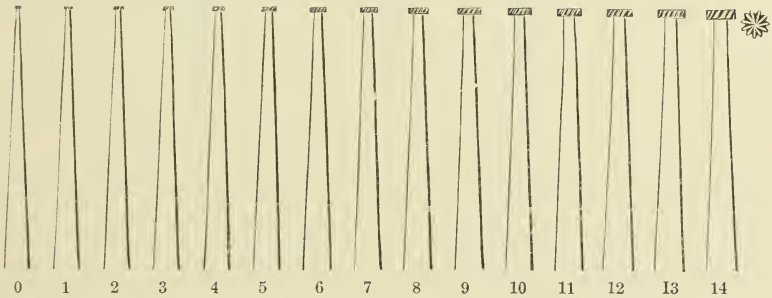
Hand Burs.

1

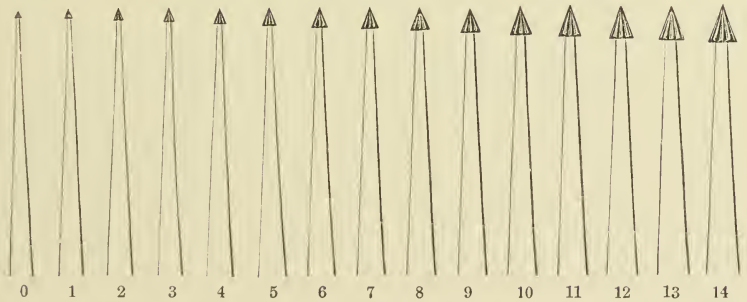
Round.



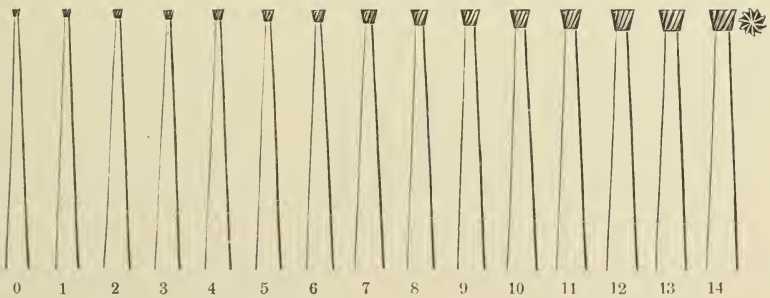
Wheel.



Cone.



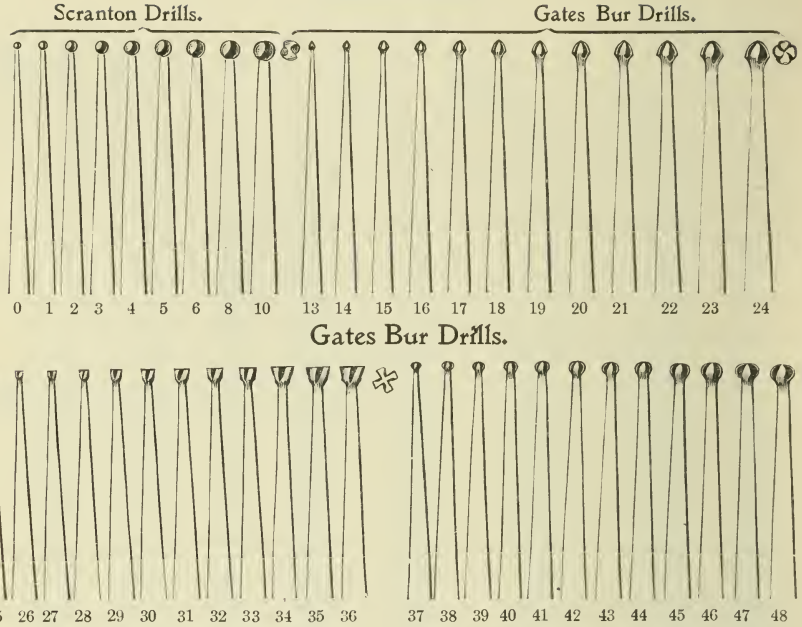
Inverted Cone.



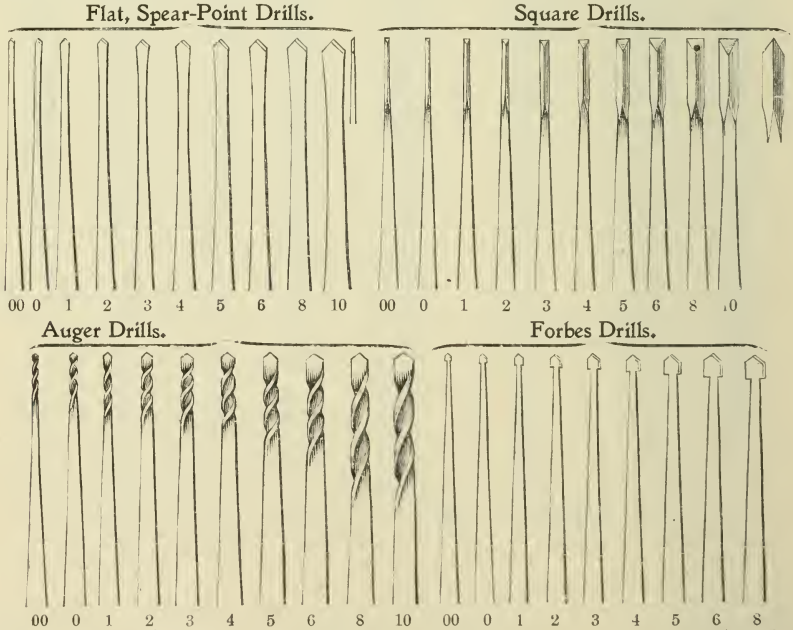
Price, Octagon Steel Handles, per doz.....$2 50

Not kept in stock for Cone-Socket Handles.

Hand Drills.



The Scranton and Gates Drills are self-cleansing in operation. The Gates Bur Drills, Nos. 13 to 24, are useful for opening cavities or pulp-canals, and accomplish it with a smooth and rapid cut, unequaled by any other instrument. Nos. 25 to 36 make excellent excavating burs, and will penetrate solid material with great ease and efficiency. Nos. 37 to 48 will be found invaluable where a smoothly finished undercut is desired, or the bottom of a cavity so shaped as to offer a more desirable surface than that formed by the round bur.


Flat, Spear-Point Drills.
Square Drills.
00 0 1 2 3 4 5 6 8 10 00 0 1 2 3 4 5 6 8 10
Auger Drills.
Forbes Drills.
00 0 1 2 3 4 5 6 8 10 00 0 1 2 3 4 5 6 8

Price, Octagon Steel Handles.....per doz. $2.50
Not kept in stock for Cone-Socket Handles.

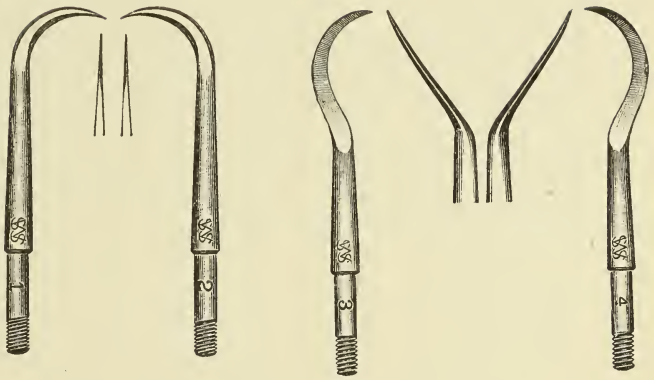
Gardiner's Gold Trimmers.

With these two Gold Trimmers the dentist is fully equipped for trimming off gold fillings in whatever position.

Price..... each $0.50

Made in Octagon Steel handles only.

Approximal Trimmers.

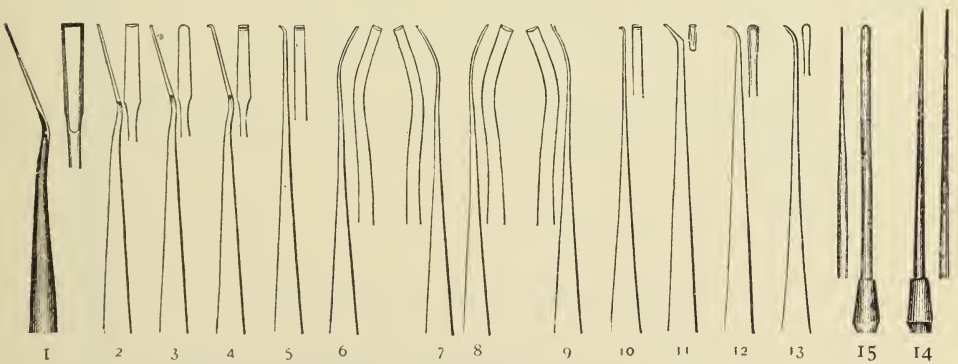


This set of four Approximal Trimmers covers a good deal of territory in the trimming of approximal fillings, more especially at the cervical margins.

Made for Cone-Socket Handles.

Price..... .....each $0.35

Allport's Pyorrhea Alveolaris Instruments.



This set includes all the instruments needed in the treatment of Pyorrhea Alveolaris.

PRICES.

Nos. 1 to 15, for Cone-Socket Handles.....each $0.35
Nos. 1 to 13, 3-16 in. File-cut Handles..... " .55
Double-End Probe Nos. 14 and 15..... " .70

For illustrations and prices of Allport's burs for use in conjunction with these instruments see page 159.

New Set of Younger's Pyorrhea Instruments.

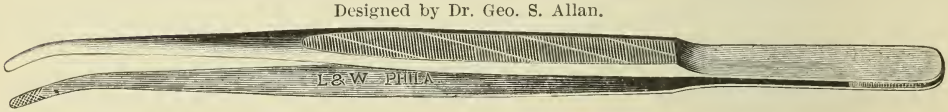
In presenting this new set it will be noticed they are much smaller than the former set of twelve, and differ in many respects. They are Dr. Younger's latest ideas, the result of experience and much thought. It is impossible to show by cuts the angles' fine, delicate front and side cutting edges of this practical set —so keen that but litle pressure is needed in using them, an important matter where a sensitive touch is often the guide to the work that is being done. Delicate as they are, however, strength has been considered in their forms, so as to permit of any use they may be put to.

We have no hesitation in saying this is the most complete set offered. They must be seen to be appreciated.

SEE NEXT PAGE.

Inlay Plier.

Designed by Dr. Geo. S. Allan.



Dr. Allan says of this useful plier:

"The Inlay Plier is a good thing. They save time and patience. With care the inlay is securely held and the danger of its flying away and being lost is greatly lessened."

Price $1.25

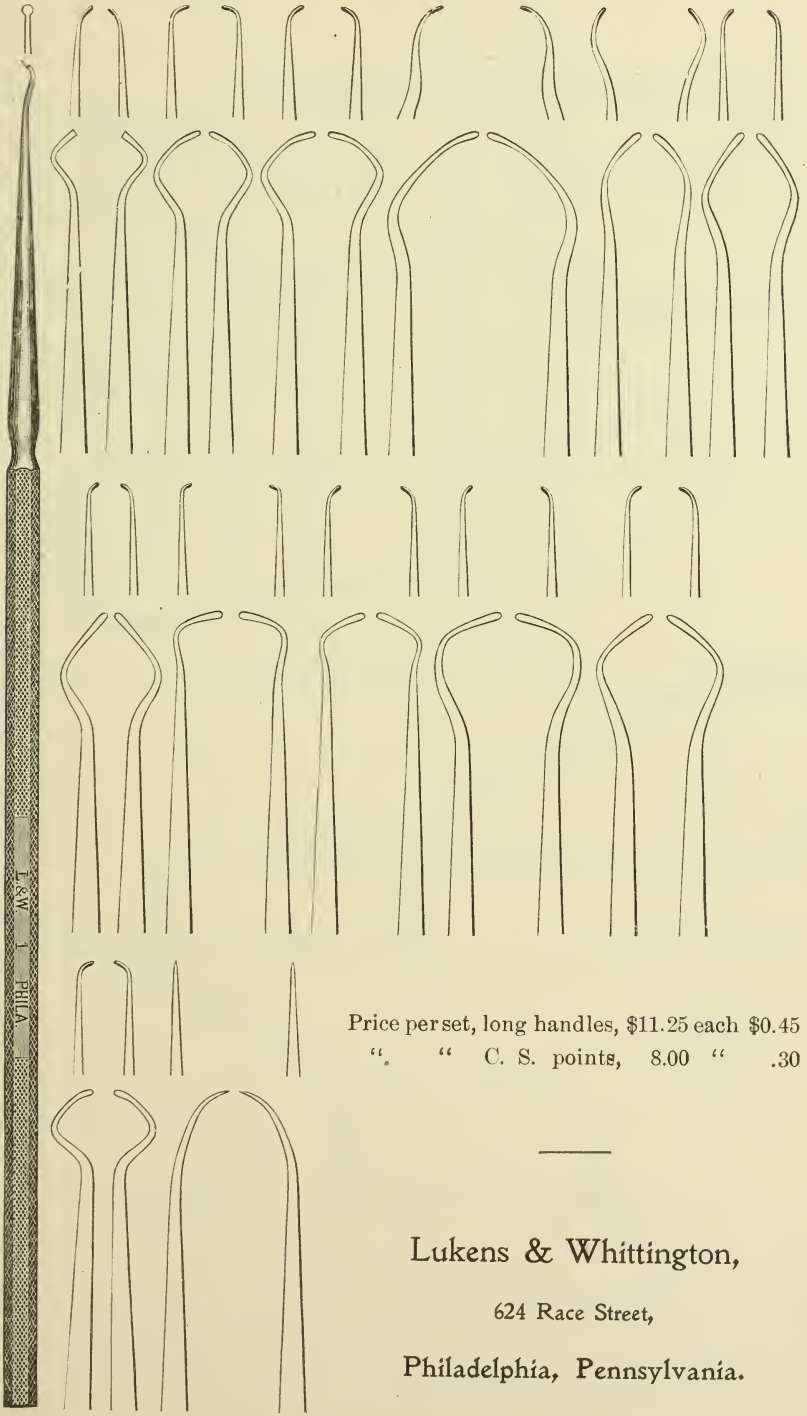
German Silver Cement Spatula.

Price, ... 50 cents.

Lukens & Whittington,

624 Race Street, Philadelphia, Pennsylvania.

New Set Younger's Pyorrhea Instruments.



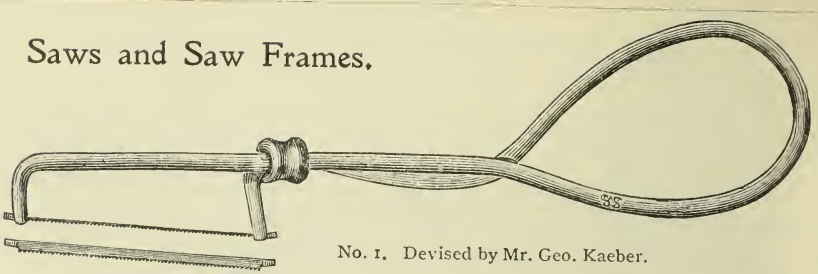
Price per set, long handles, $11.25 each $0.45
" " C. S. points, 8.00 " .30

Lukens & Whittington,

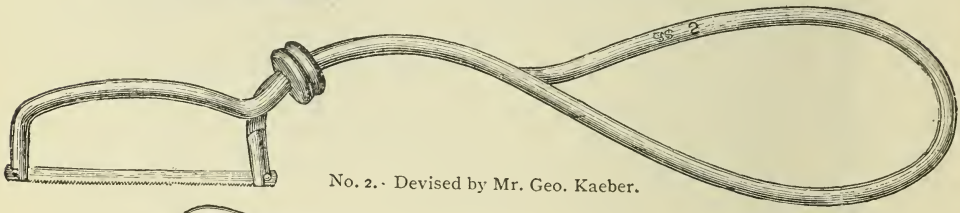
624 Race Street,

Philadelphia, Pennsylvania.

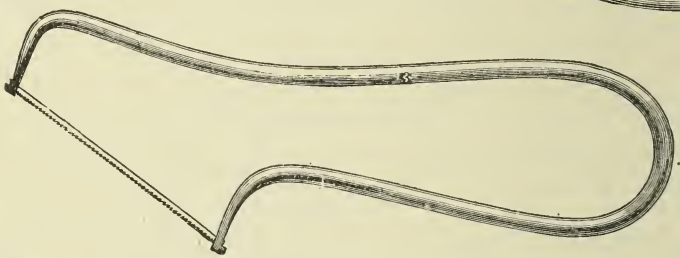
Saws and Saw Frames.



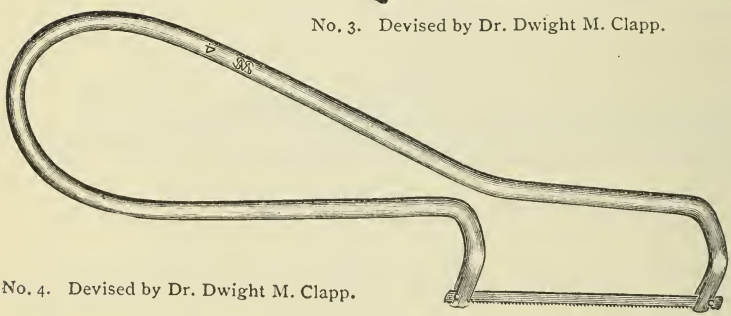
No. 1. Devised by Mr. Geo. Kaeber.



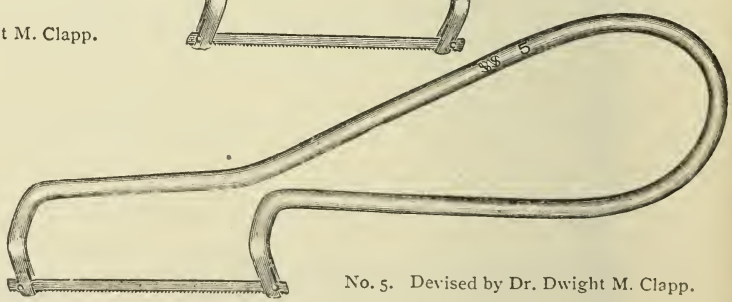
No. 2. Devised by Mr. Geo. Kaeber.



No. 3. Devised by Dr. Dwight M. Clapp.



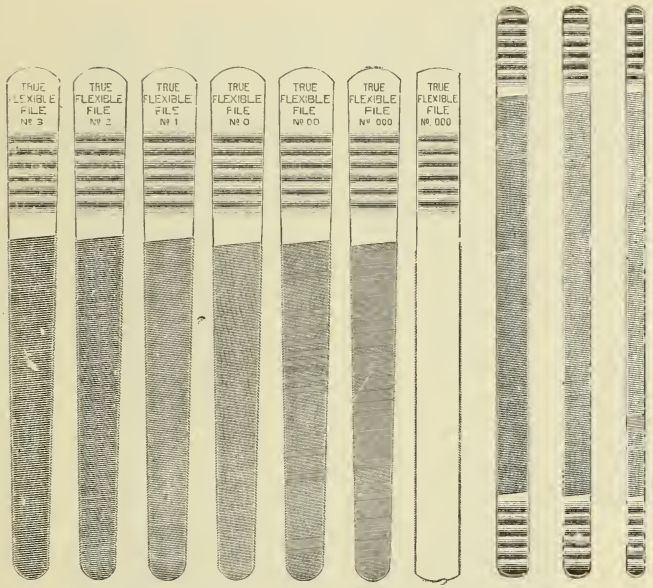
No. 4. Devised by Dr. Dwight M. Clapp.



No. 5. Devised by Dr. Dwight M. Clapp.

Kaeber Frame No. 1, with one Saw	$ 0 60
" " " 2, " "	75
Clapp " " 3, " "	30
" " " 4, Right Side, with one Saw	40
" " " 5, Left " " "	40
Flat-Face Files, per doz	1 00
Saw for Frames Nos. 1 to 5, cut on one edge, per doz	25
" " " 1 to 5, cut on both edges, "	38

"Flexo" Files, Saws and Strips.


TRUE FLEXIBLE FILE Nº 3
TRUE FLEXIBLE FILE Nº 2
TRUE FLEXIBLE FILE Nº 1
TRUE FLEXIBLE FILE Nº 0
TRUE FLEXIBLE FILE Nº 00
TRUE FLEXIBLE FILE Nº 000
TRUE FLEXIBLE FILE Nº 000

These flexible files are a great improvement over the ordinary separating file.

They can be adapted to the shape of the tooth without breaking, they cut rapidly and smoothly, without dragging, until worn out, and used wet clear themselves.

We illustrate 6 forms only, but also supply Nos. 4 and 5, which are coarser cuts. The hold on Nos. 4 and 5 is smooth.

Plug Finishing File.

Saws and Files for Saw Frames.

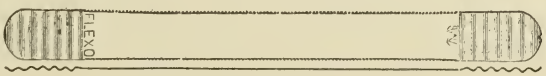
PRICES.

Separating Files, Nos. 000 to 5.....per doz., $1.25

We also furnish these with DRAW CUT at same prices.

Finishing Strips	per doz.,	1.00
Plug Finishing Files	per doz.,	2.00
Saws for Saw Frame, cut on one edge	per doz.,	.25
Saws for Saw Frame, cut on both edges	per doz.,	.38
Files for Saw Frame	per doz.,	1.00

"Flexo" Saw for Hand Use.

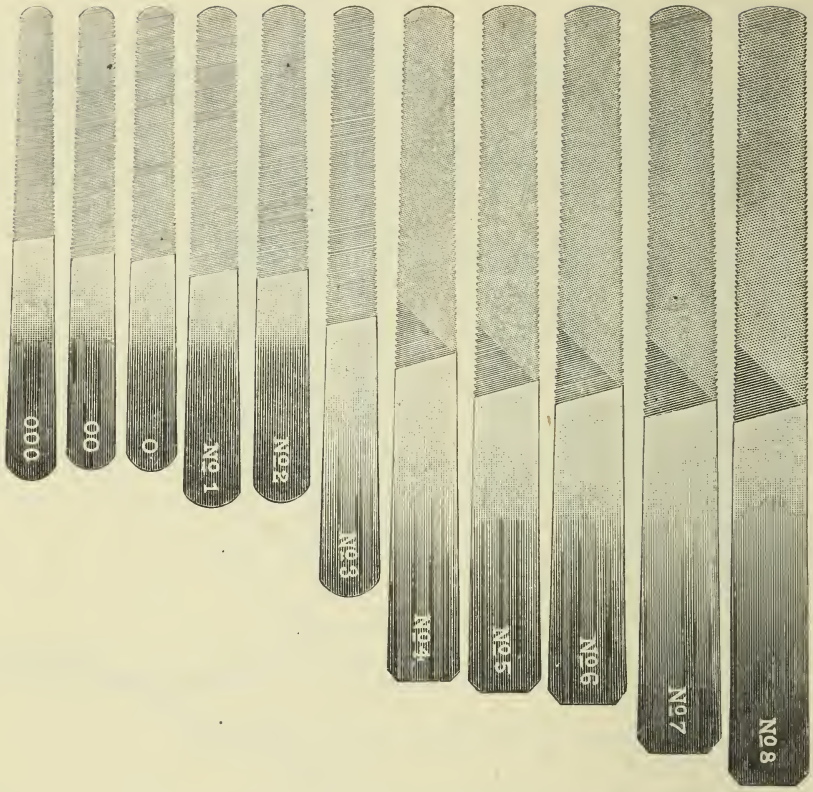


Patented December 1, 1885.

This Saw is of the same thickness as the No. 000 Separating File, from which it differs only in being cut on the edges with both sides safe, and in having a crimped finger-hold at both ends. Very fine and thin, as shown.

Price ..... per doz., $1.00

Separating Files.



Our Separating Files afford a wide range of sizes and cuts, from the almost polishing face of No. 000 to No. 8, eleven sizes in all, with almost as great a range in cut of working surface. The finer files are almost mere lines in thickness; the coarser ones are perceptibly heavier. Some of them are cut on both sides, some on only one, as indicated below.

In the regular line, Nos. 000 to 4 and 6 have one safe side; Nos. 5, 7 and 8 are cut all over. All have the push-cut. Put up in dozen packages containing one of each number separate, or assorted.

PRICE.

Push-cut.....No. 000 each, 12 cts; per doz., $1.25
" .....Nos. 00 to 8 each, 10 cts.; per doz., 1.00
" .....Assorted ..... per doz., 1.00

Draw-Cut Separating Files.

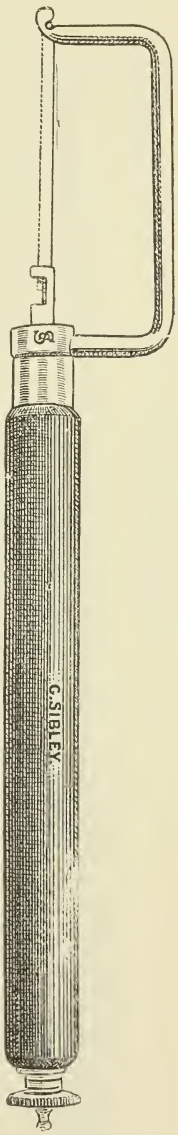
For very exact work, Nos. 00 and 0 of our Separating Files are made with the draw-cut.

PRICE.

Draw-cut.....Nos. 00 and 0 each, 13 cts.; per doz., $1.50

Black's Saw Frame.

(Suggested by Dr. G. V. Black.)
Made by Gideon Sibley.



The chief defect of Saw Frames hitherto made, even the best of them, is the constant menace to the cheeks of the patient from the rough, unprotected saw ends and ill finished frame; in fact the utmost skill will scarce prevent wounding the mouth of patient unnecessarily while using such frames.

The Black Frame is made with special reference to overcoming this serious defect, which it does to perfection. It is so constructed that both ends of the Saw drop into slots, which perfectly cover the spudded ends, thus effectively protect the cheek of the patient. It is adapted to either Kaeber or Clapp Saws and is a thoroughly well made, strong and handsome ebony handled tool.

Price, each, in neat box $1.50

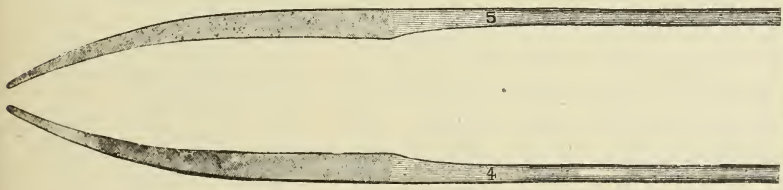
File-Carriers.

For carrying files or parts of files for finishing fillings or separating teeth, enabling the operator to utilize what would otherwise go to waste —the best part of broken files.

PRICES.

Nos. 1, 2, 3 .....each, $0.38
No. 4 .....each, .40
No. 5 .....each, .50
No. 6. Dr. Abbott's. For upper and lower fillings. Price, Ebony Handle $2.50
No. 7. Dr. Abbott's. For separating. Price, Ebony Handle, each, 2.00
No. 8. Ebony Handle Carrier. For separating molars.....each, 2.50
No. 9. Dr. J. C. Connor's pattern. Price, Ebony Handle, each, .75

Dr. Meriam's Right and Left Plug-Finishing Files.



Price .....each, $0.20
Price .....per doz., 2.40

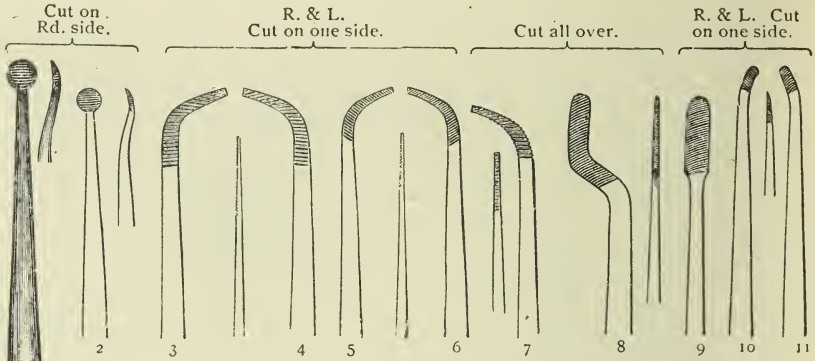
Dr. Taft's Plug-Finishing Files.

A small, delicate File, with spring temper, designed for dressing down fillings in approximal cavities. Right and left, either push or pull-cut.

Price, Push-Cut or Regular ..... each 13 cts.; per doz., $1.50
Price, Pull-Cut ..... each 13 cts.; per doz., 1.50
Price, Oval ..... each 13 cts.; per doz., 1.50

Plug Trimmers and Plug-Finishing Files.

Dr. F. Searle's Plug Trimmers.

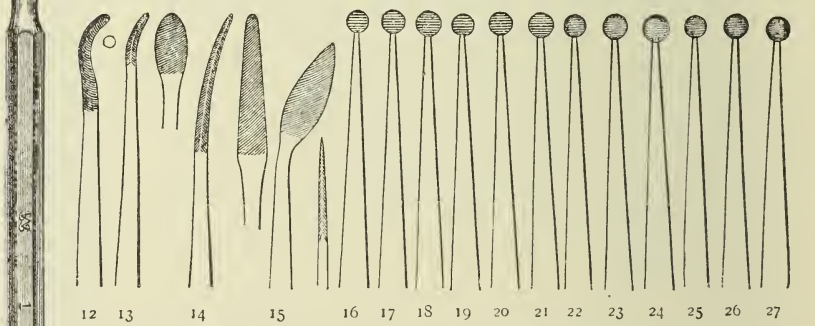


Dr. Searle's Plug Trimmers.

Cut all over.

Dr. D. D. Smith's Approximal Trimmers.

Coarse Cut one side. | Coarse Cut both sides. | Fine Cut one side. | Fine. Cut both sides.

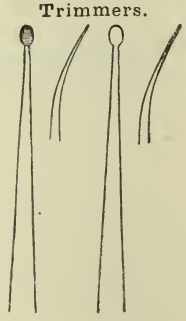


Right and Left Approximal Trimmers.

Patented March 13, 1883.

Dr. H. Weston's Two-Faced Safe-sided File.

Dr. M. L. Rhein's Approximal Trimmers.

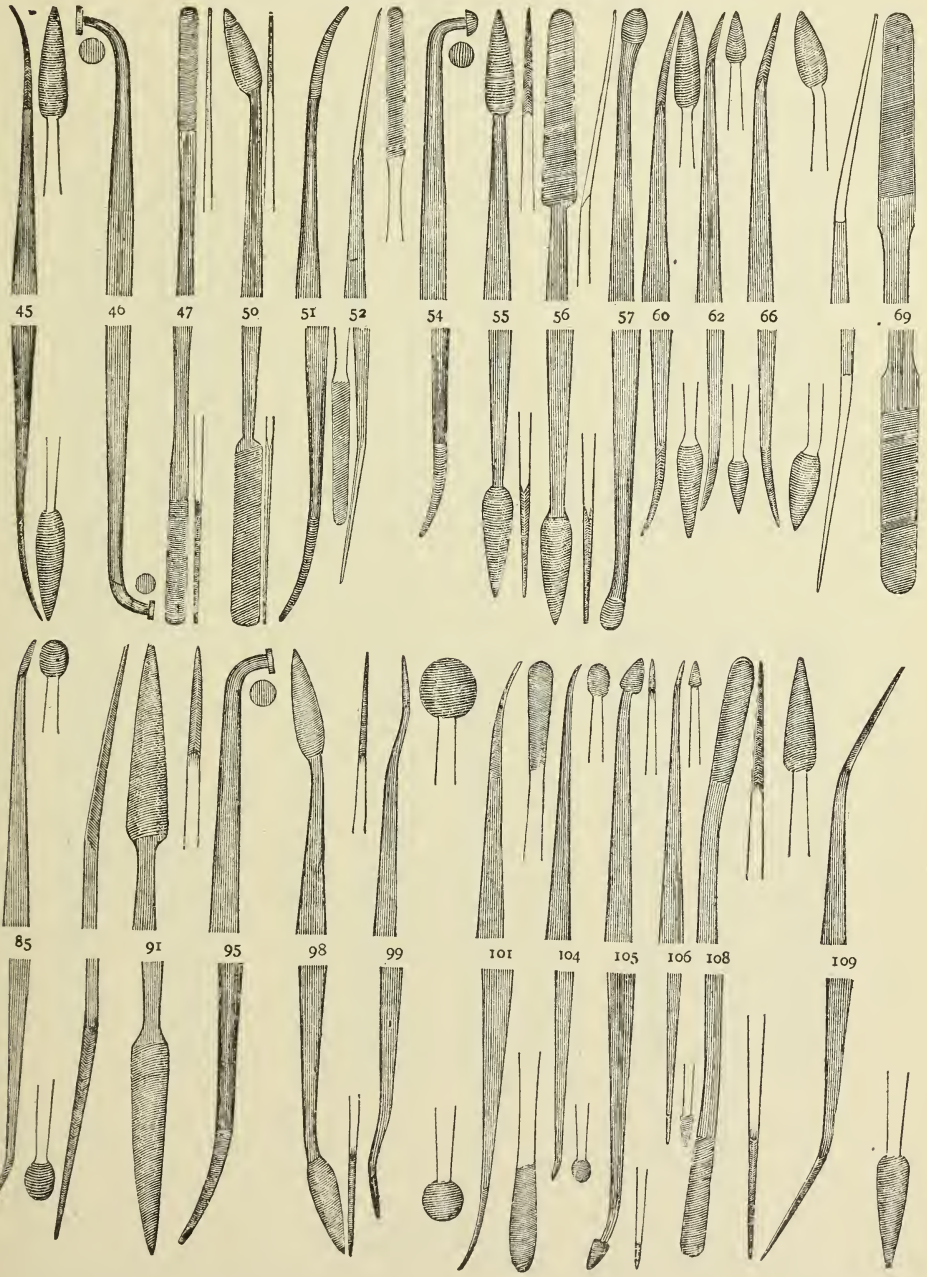


No. 31. Cut on inside. No. 32. Cut on outside.

PRICES.	Octagon Handles Nickel-Plated.	Cone-Socket Points.
Nos. 1 to 6, 10, 11, ...	each, $0.40	$0.25
Nos. 7 to 9, 12 to 18, 28, 29	each, .50	.35
Nos. 19 to 24, 31, 32	each, .60	.45
Nos. 25 to 27, 30, ...	each, .75	.60

FILES.

Double-End Plug-Finishing, for Lateral and Crown Cavities.

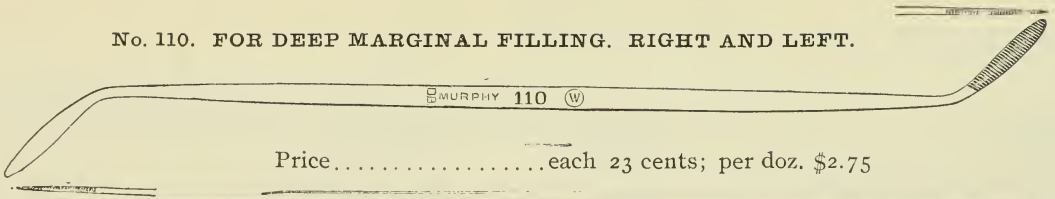


There is perhaps not a place in the mouth which cannot be reached for plug-finishing purposes with some one of the forms of Files shown here.

Price .....each 23c; per doz. $2.75

Contour Plug-Finishing Files.

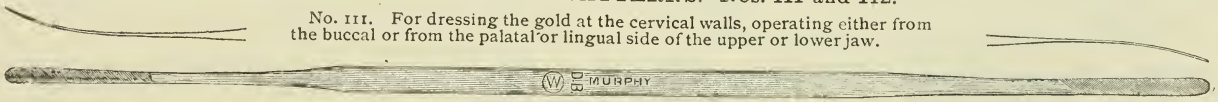
No. 110. FOR DEEP MARGINAL FILLING. RIGHT AND LEFT.



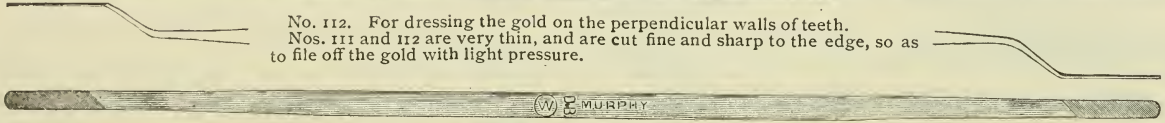
Price.....each 23 cents; per doz. $2.75

DR. J. T. CAZIER'S PATTERNS. Nos. 111 and 112.

No. 111. For dressing the gold at the cervical walls, operating either from the buccal or from the palatal or lingual side of the upper or lower jaw.

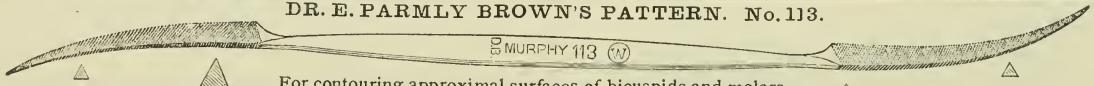


No. 112. For dressing the gold on the perpendicular walls of teeth. Nos. 111 and 112 are very thin, and are cut fine and sharp to the edge, so as to file off the gold with light pressure.



Price.....each 23 cents; per doz. $2 75

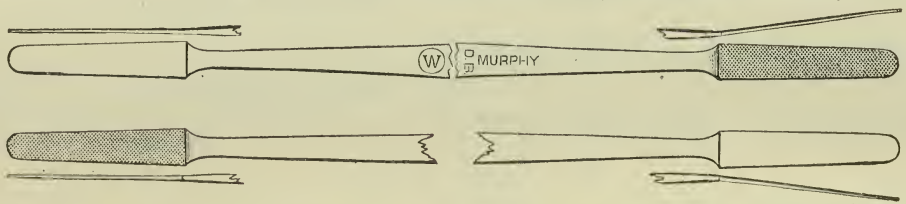
DR. E. PARMLY BROWN'S PATTERN. No. 113.



For contouring approximal surfaces of bicuspids and molars. Three-sided, and cut on all sides.

Price .....each 30 cents; per doz. $3.50

DR. A. L. NORTHROP'S PATTERN. No. 114, RIGHT AND LEFT.



These Double-End Right and Left Files, beveled on the smooth side, making sharp, thin edges, are very finely cut.

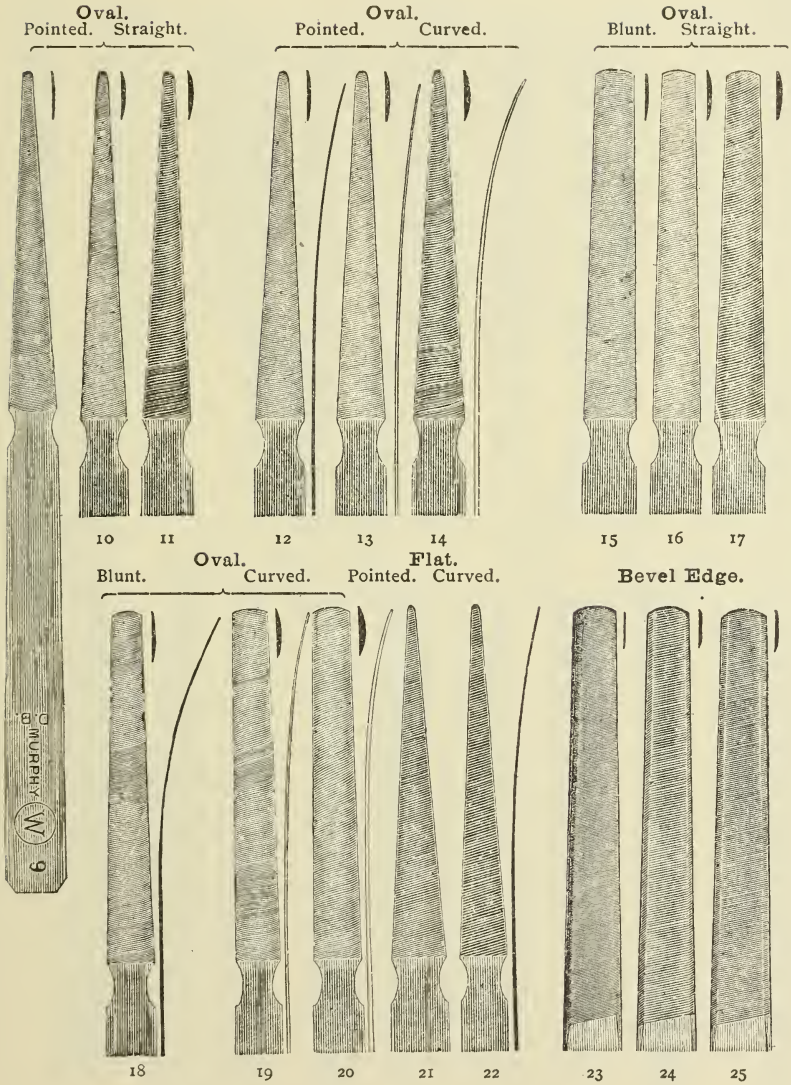
Price .....each 23 cents; per doz. $2.75

Earnest's Files.

Separating, No. 000.....per doz. $1.25
" Nos. 00 to 8..... " 1.00

FILES.

Plug-Finishing.



These Files run thin, medium and thick, and fine, medium and coarse-cut.

Price .....each 18c: per doz. $2.00

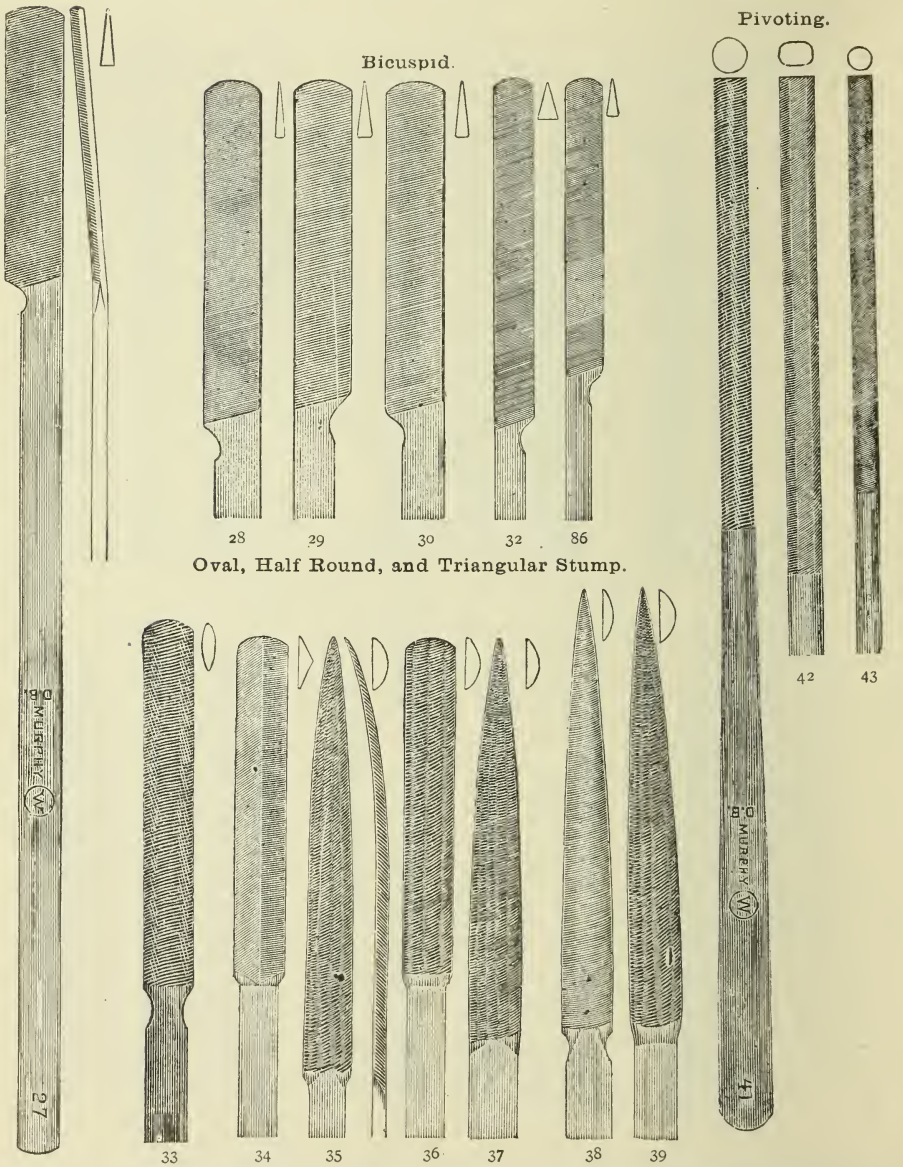
Ribbon Saws.

There is never a poor Ribbon Saw in our stock. They are always very flexible and quite thin. They are cut on both edges. The edges are perfect.

Two widths, $\frac{3}{8}$ and $\frac{1}{2}$ inch.

Price, each $0.10

Bicuspid, Pivoting and Stump Files.



BICUSPID. Nos. 27, 28, 29, 30, 32, 86, are rights and lefts, cut inside, outside, and all over. No. 27 is bent; No. 28 is thin and fine-cut; No. 29, medium and medium-cut; No. 30, thick and coarse-cut; No. 32, extra thick; No. 86, narrow and medium-cut.

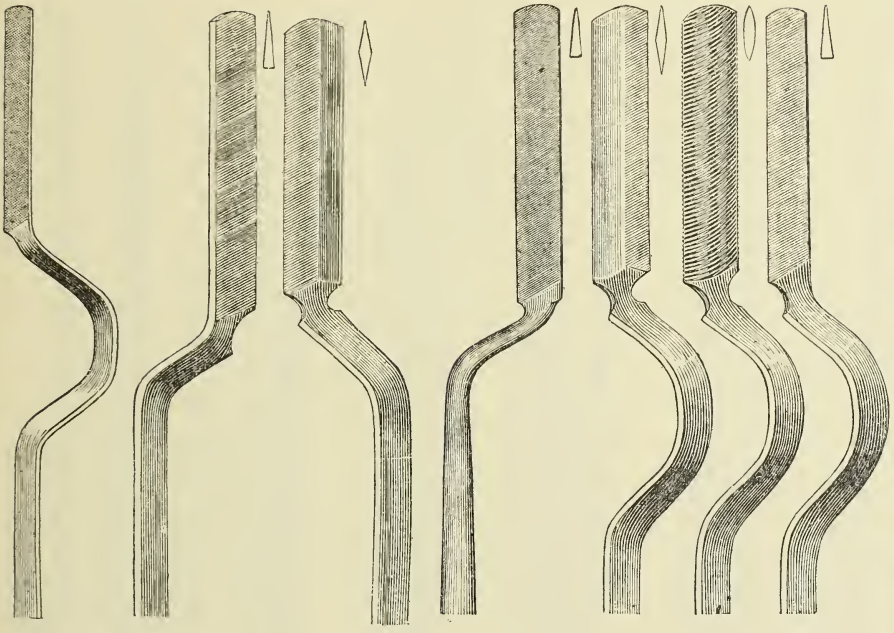
STUMP. No. 33, oval, one safe side and cut all over; No. 34, triangular, cut all over; No. 35, half oval, pointed, curved, cut all over; No. 36, half oval, blunt, cut all over; No. 37, half oval, thin, pointed, fine-cut all over; No. 38, half oval, pointed, medium-cut all over; No. 39, half oval, thick, coarse-cut all over.

PIVOTING. No. 41, round, coarse-cut; No. 42, oval, medium-cut; No. 43, round, small, fine-cut.

PRICES.

Bicuspid, Stump, and Pivoting Files.....each 20 cents; per doz.....$2.40

Single and Double Curve Molar Files.



115 78 87 107 80 81 84

These Files are made cut inside, outside, or all over. In ordering, state cut wanted; whether for the right or left side of the mouth; upper or lower jaw.

PRICES.

No. 78.	Single Curve, Knife Edge	each 20 cts.; per doz.	$2.40
" 87.	" Feather Edge	" 25 " "	3.00
" 107.	" Knife Edge	" 25 " "	3.00
" 80.	Double Curve, Feather Edge	" 30 " "	3.50
" 81.	" Oval Face	" 30 " "	3.50
" 84.	" Knife Edge	" 25 " "	3.00
" 115.	Double Curve, Knife Edge. Light and delicate in form (pattern supplied by Dr. J. T. Cazier), so that it can frequently be used in operations for which the ordinary bicuspid and molar files are too heavy ..	each 25 cts.; per doz.	3.00

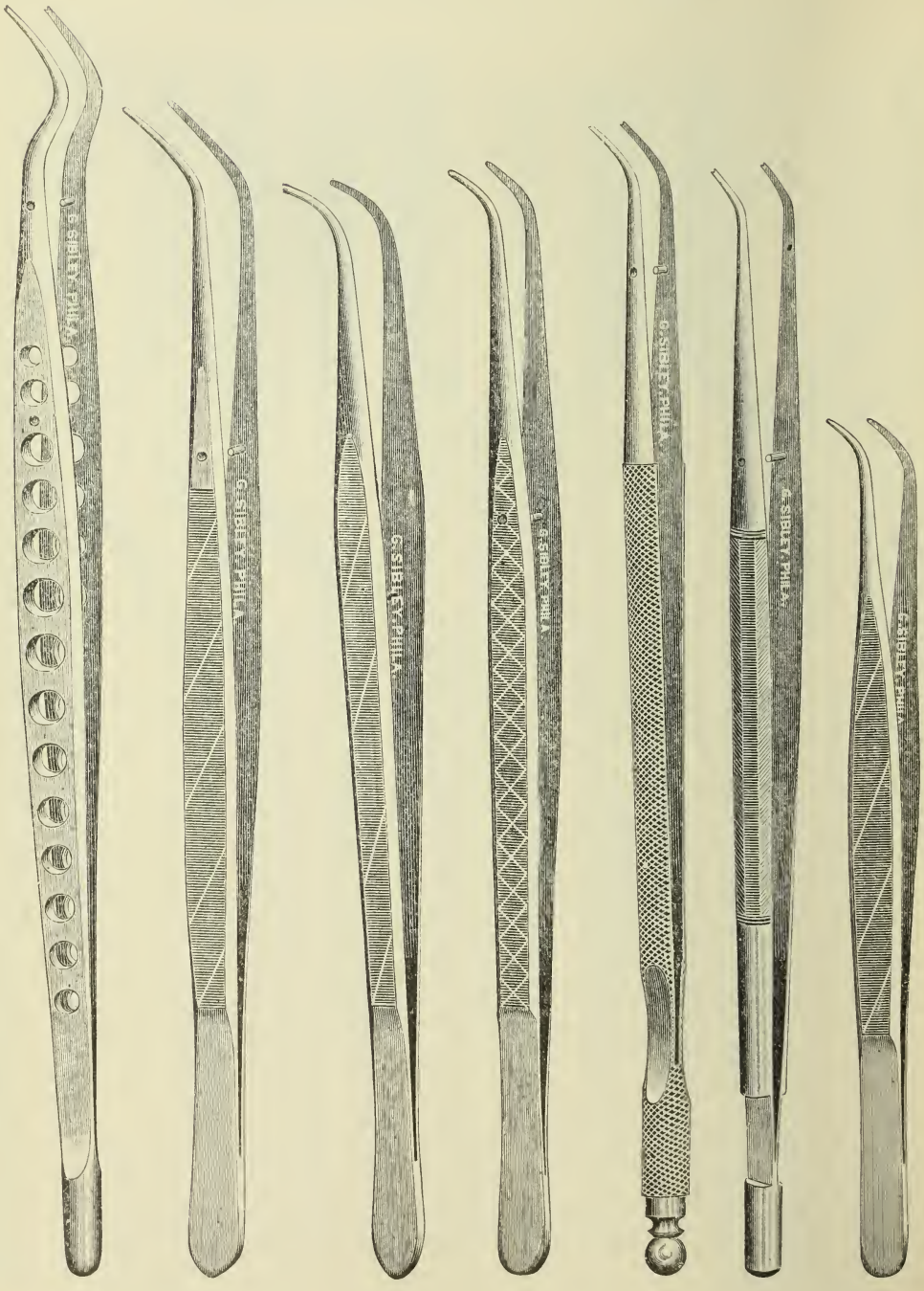
Stine's Plug Trimmer and Scaler.

The form of this instrument exactly adapts it to the double purpose of a Plug Trimmer and a Scaler.

The convex edge, thin and sharp, makes it very efficient in shearing off the surplus of fillings, and the opposite side has the requisite strength and angular edges suitable for a Scaler.

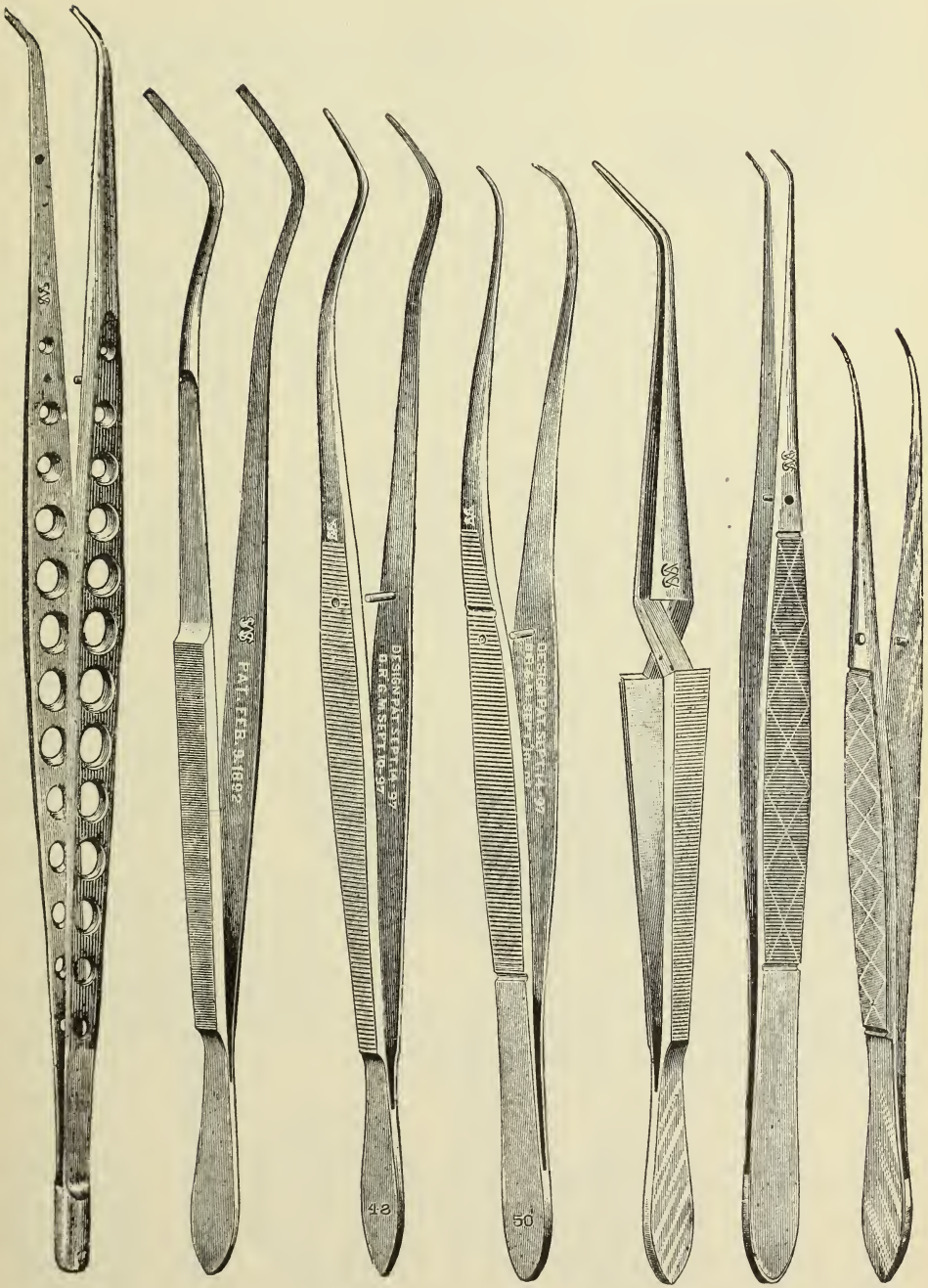
Price ..... each $0.50

Foil Carriers and Dressing Pliers.



No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
$2.75	$1.25	$1.00	$1.00	$1.75	$1.75	$0.60

Foil Carriers and Dressing Pliers.—Continued.



No. 8. $2.50 | No. 9. $1.25 | No. 10. $1.50 | No. 11. $1.50 | No. 12. $1.50 | No. 13. $1.25 | No. 14. $1.00

REPAIRS.

We do most of our own repairing right here in our own shop. There are some things we never try to fix. There are some things that can't be properly fixed outside of the shop where they are made. If they can be fixed outside we can fix them.

We don't know of anybody who is doing better repair work than we are doing. We can't make new things out of old things, but we come as close to doing that as any person.

PRICES FOR REPAIRING.

Burs.

Recutting cavity burs—stone cut.....per doz., $0.75
Recutting plug finishing burs—stone cut..per doz., 1.00
Six dozen lots and over at reduced rates.

We restone every bur sent to us. We treat them as if they were new. The work couldn't be better. If you pay more than our prices you pay too much. If you pay less you get poorer work.

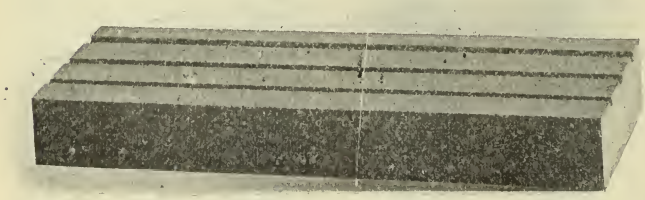
Pluggers.

Re-serrating ordinary pluggers .....per doz., $1.50
Re-serrating Varney or other fine pluggers.....
.....per doz., $2.00 to $3.00

Excavators.

Excavators re-pointed ..... per doz., 75c to $1.00

SHARPEN YOUR OWN EXCAVATORS.



There isn't any use sending a spoon or any other form of excavator to us for repair if it is just dull.

This grooved carborundum hone will do the work as well as it can be done in any factory on earth. It is the only hone made that will sharpen a spoon excavator.

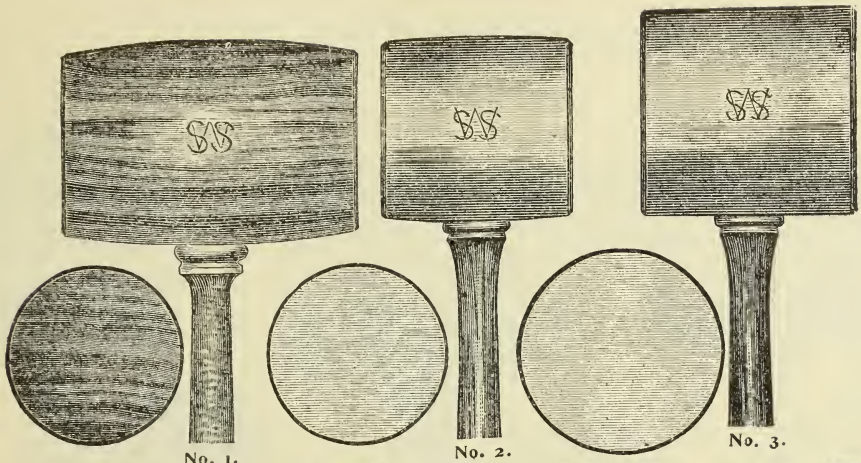
There are three different sized grooves on top of the hone as shown. They fit any sized excavator. If the instrument is dull it doesn't have to be drawn the length of the hone more than about twice. When the feather edge has been dressed off on the flat side of the hone the excavator is as sharp as the day it was made.

The hone is made of genuine carborundum by the Carborundum Company, at Niagara Falls, and will last for an indefinite period.

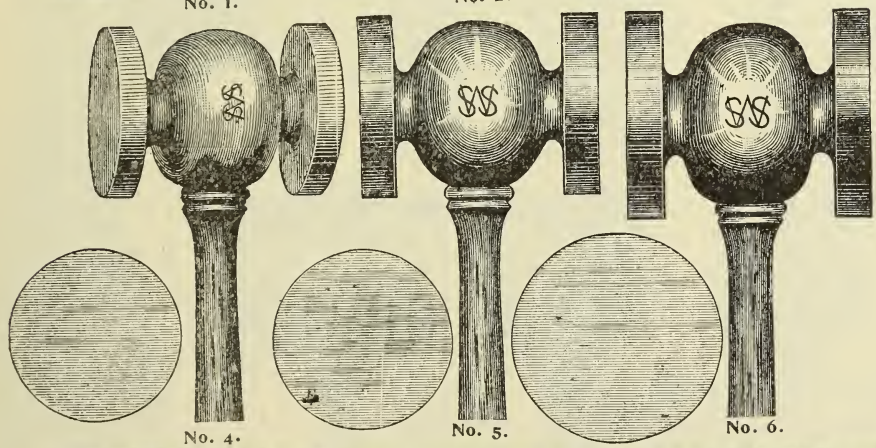
PRICES.

Large (cut shows about two-thirds size).....coarse grit, $0.50
Large (cut shows about two-thirds size).....fine grit, .65
Small, 2⅞x11-16x⅜ .....coarse grit, .35
Small, 2⅞x11-16x⅜ .....fine grit, .50

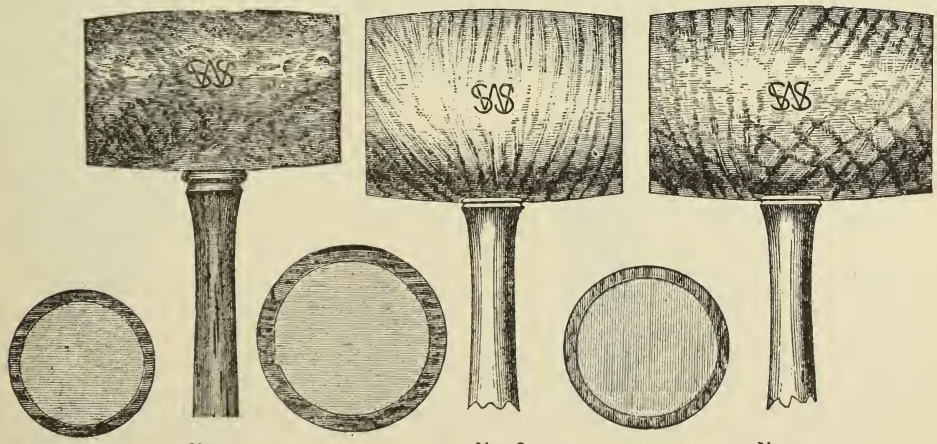
Plugging Mallets.



No. 1. No. 2. No. 3.



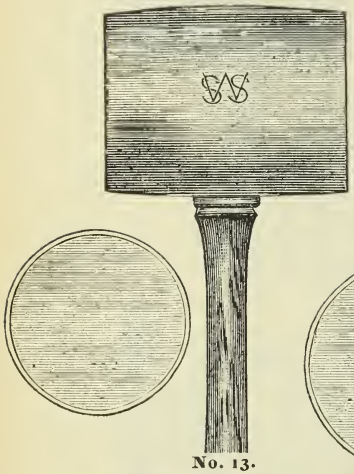
No. 4. No. 5. No. 6.



No. 7. No. 8. No. 9.

For prices, etc. see next page.

Plugging Mallets.—Continued.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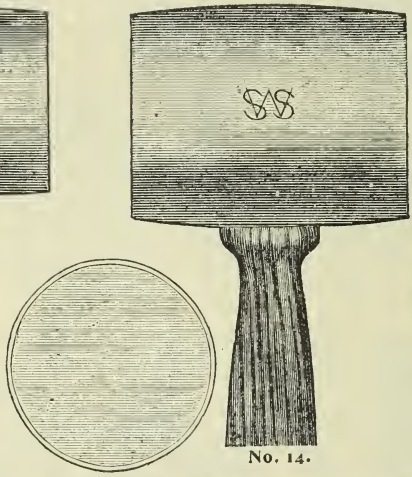
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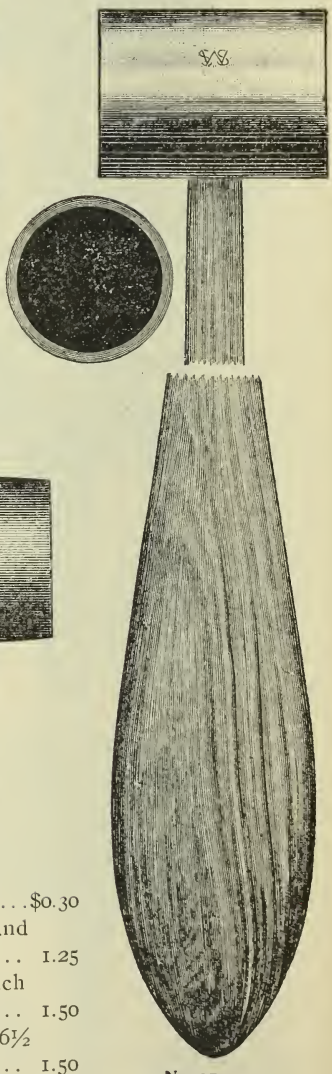
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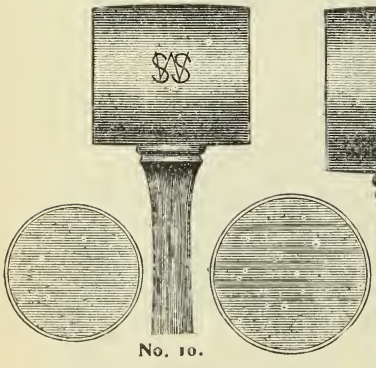
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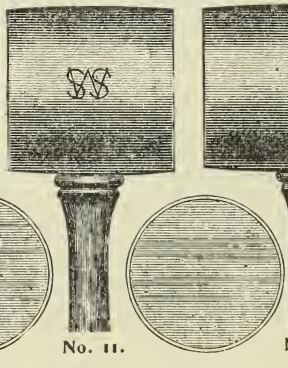
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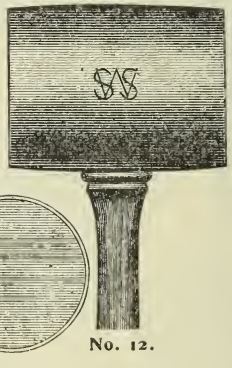

No. 12.

No. 1 Lignum vitæ, Rosewood handle, length 10½ inches..... $0.30
Nos. 2 and 3 Patent metal head, nickel plated, weights 4½ and 6½ oz., and lengths 6¾ inch and 7¼ inch respectively.... 1.25
Nos. 4, 5 and 6 Robbins, heads soft steel, lengths 6½ inch, 5 inch and 7¼ inch respectively 1.50
Nos. 7, 8 and 9 Butler's wood case, metal centre, legths 6½ inch, 7 inch and 7¼ inch respectively 1.50
Nos. 10 and 11 Dead blow, metal case, weights 2 and 3 oz., and lengths 6¼ inch and 6½ inch respectively 1.50
Nos. 12 and 13 Dead blow, metal case, weights 4 and 6 oz., and lengths 6¾ inch and 7 inch respectively 2.00
No. 14 Palmers, metal case, weight 8 oz., length 7½ inch 2.50
No. 15 Jennings' metal case, hard leather centre, length 7 inch..... 1.50

Mouth Mirrors.

(Made by C. Ash & Sons, Ltd.)

Mirror and Lens

Mouth Mirror and Examining Lens Combined.

In ebony handle..... $2.00

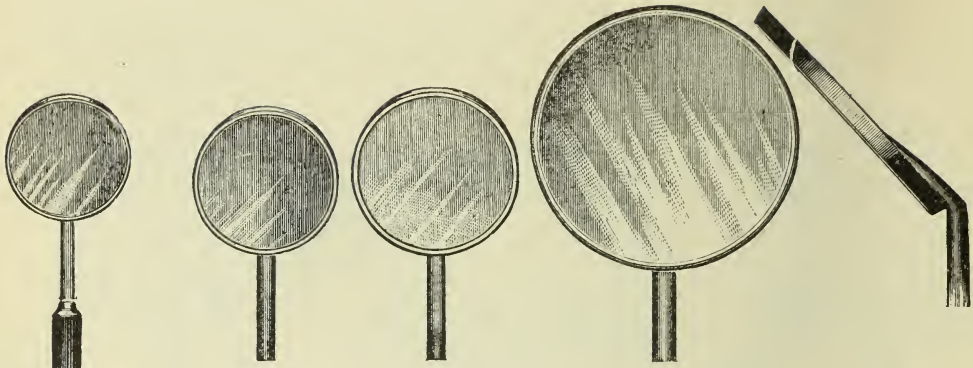
54c

Ash's High Grade Mouth Mirrors.

Ebony handle, small and Medium.....each $1.00
" " large..... " 1.25
" " extra large..... " 1.50

Mouth Mirrors.

Cuts Full Size.



Medium. Medium Large. Large.

We handle just one kind of Mouth Mirrors. They are the very best mirrors we can buy. There is never a cloudy glass among them. A bad glass can never, by any possible chance, find its way into our stock.

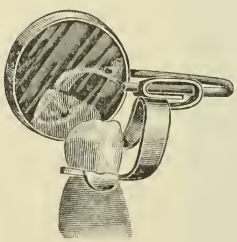
PRICES.

		Ebony Handle.	Ivory Handle.
No. 1.	Plane (small)	each $0.75	each $1.25
" 2.	" (medium)		
" 3.	" (medium large)		
" 4.	" (large)	" 2.00	
" 5.	Magnifying, size of No. 1	" 1.00	" 1.50
" 6.	" " " " " 2		
" 7.	" " " " " 3		
" 8.	" " " " " 4	" 2.00	

No. 1.
SMALL.

Ivory's Clamp Mirror.

Patented June 28th, 1898.



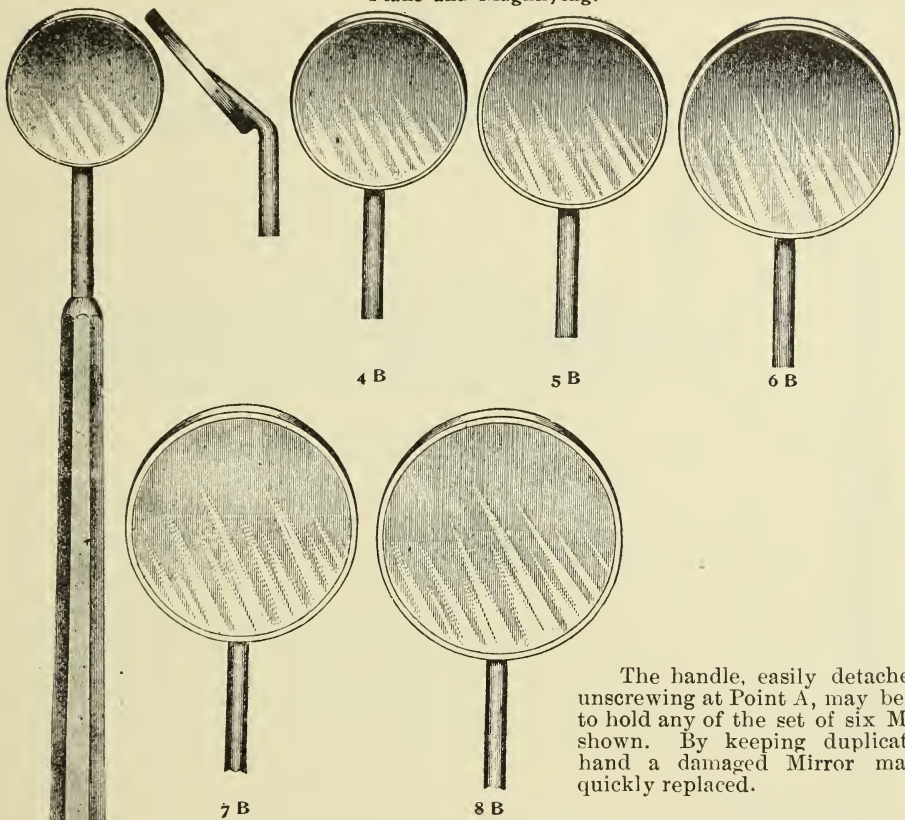
This Ball and Socket Mirror is an improvement over any idea previously offered to the profession. The credit of the invention belongs to Dr. Chas. Harndon, of Bowanville, Ontario.

The ball and socket movement gives any position desirable, and will attach to any clamp. It has not only the ball and socket movement, but an arm movement from side to side, and forward and backward adjustment.

Price ..... each $1.00

Aluminum Handle Mouth-Mirrors.

Plane and Magnifying.



The handle, easily detached by unscrewing at Point A, may be used to hold any of the set of six Mirrors shown. By keeping duplicates at hand a damaged Mirror may be quickly replaced.

PRICES.

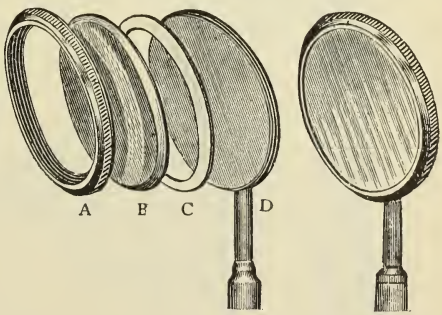
Nos. 3 B to 6 B	Complete, with Handle, Plane	each $1.00
" " "	Complete, with Handle, Magnifying	" 1.00
" " "	Mirrors less Handle, Plane	" .65
" " "	Mirrors less Handle, Magnifying	" .65
" 7 B and 8 B,	Magnifying or Plane	" 1.25
Same, less Handles		" .90

3 B

Screw-Frame Mirror.

A glass may be removed from this frame and a new one inserted in about a minute. The cut tells the story.

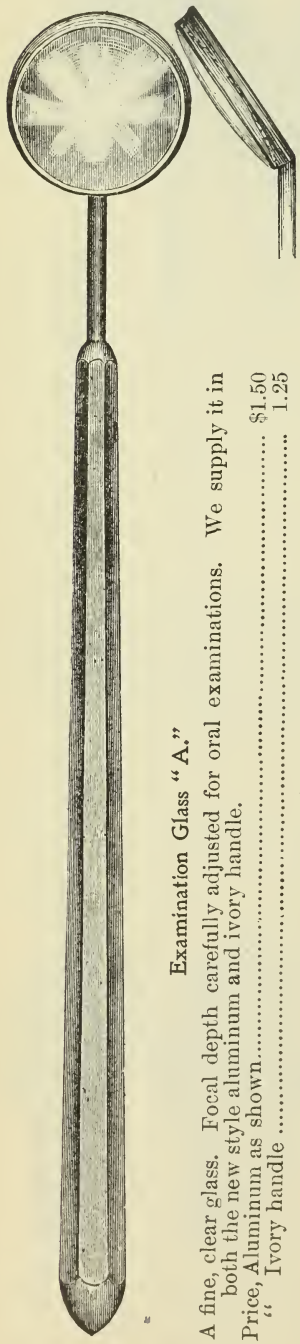
Made in one size only.
Diameter ⅞-inch.



PRICES.

Plane	each $1.25
Magnifying	" 1.25
Extra Mirrors only, Plane	" .45
Extra Mirrors only, Magnifying	" .45

Magnifying Examination Glass.



Examination Glass "A."

A fine, clear glass. Focal depth carefully adjusted for oral examinations. We supply it in both the new style aluminum and ivory handle.

Price, Aluminum as shown $1.50
" Ivory handle 1.25

Magnifying Toilet Mirror.

For travelers this will be found especially convenient, as it answers every purpose, while occupying little space.

Valuable in the office for showing patients completed operations.

Glass is magnifying. Handle, ivory finish. Diameter of glass, 2 inches.

Price $2.00

Office Mirror.

This is a glass for toilet purposes as well as for showing patients completed operations. It has an inlaid wooden frame with adjustable metal handles. One side of the glass is magnifying, the other plane.

Price ..... each $2.50

Miscellaneous Mouth Mirrors.

No. 15.	Flat Ebony Handle, Plane Glass	$1.00
No. 16.	Flat Ebony Handle, Magnifying	1.00
No. 17.	Double End, one Magnifying, the other Plane	1.75
No. 18.	Oval, (Dr. C. R. Butler's), Plane Glass, Ebony Handle	1.25
No. 19.	Oval, (Dr. C. R. Butler's), Magnifying Glass	1.25
No. 20.	Oval, (Dr. C. R. Butler's), Plane Glass, Ivory Handle	1.75
No. 21.	Oval, (Dr. C. R. Butler's), Magnifying Glass	1.75
No. 22.	Ebony Handle, Flexible Stem, Plane Glass..	1.25
No. 23.	Ebony Handle, Flexible Stem, Magnifying Glass	1.25
No. 24.	Ivory Handle, Flexible Stem, Plane Glass..	1.75
No. 25.	Ivory Handle, Flexible Stem, Magnifying Glass	1.75

Anti-Cloudine.

(Made by C. Ash & Sons.)

A preparation to prevent the condensation of moisture on mouth-mirrors and eye-glasses. A very thin film of the Anti-Cloudine spread over the surface of the glass and then wiped off with a soft material will prevent condensation for about thirty-six hours, when the application should be renewed. The application and subsequent removal of the Anti-Cloudine is an excellent cleanser for the glass.

Price..... ...per jar $0.25

Reglassing Mirrors.

One handle will out wear a lot of glasses. There isn't any sense in buying an entire new mirror when the glass is used up.

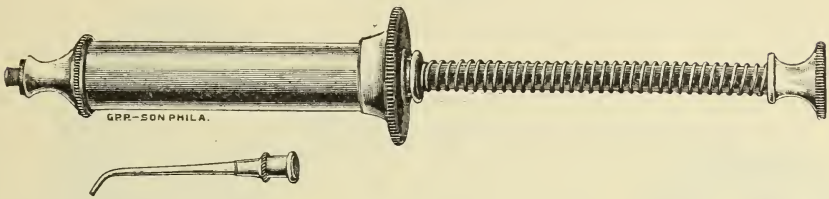
We insert new glasses at the following prices. When the mirror is returned it is as good as new.

PRICES.

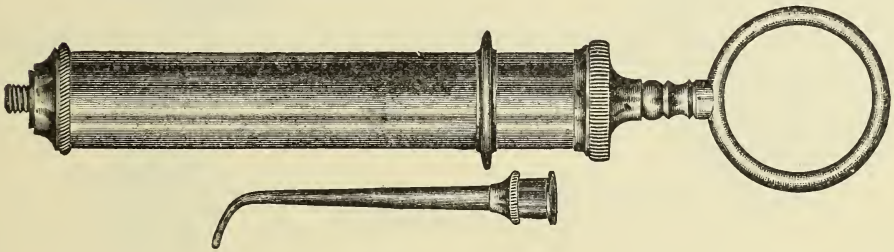
Extra glasses for all mirrors except those noted below	each	$0.35
Inserting same, including new nickel parts	"	.25
Extra glasses for Nos. 4 and 8	"	.90
Extra glasses for Nos. 18 to 25	"	.80

Syringes.

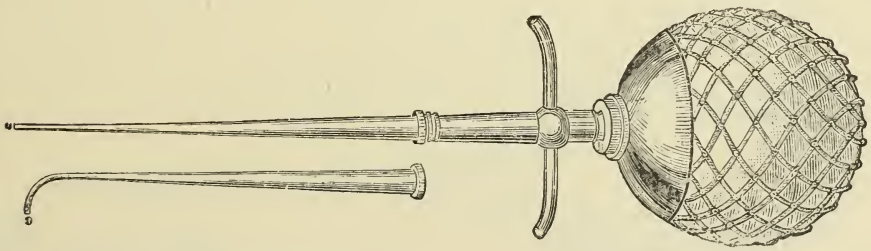
Order by Number.



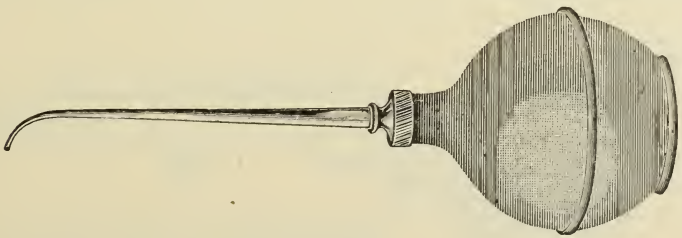
No. 1. Self-filling, all-metal Syringe..... $ 1.25



No. 2. All metal, as shown..... $ 1.00
No. 3. Same as No. 2, with addition of finger rings on each side..... 1 25
No. 4. Similar in form to No. 2, but with glass barrel, metal casing; two pipes, straight and curved 4.00
No. 5. Hard rubber, same form as No. 2..... .75
No. 6. Hard rubber, one curved coin silver pipe..... 1.25
No. 7. Hard rubber, one straight or curved platinum pipe..... 3.00
No. 8. Hard rubber, one straight or curved 18K gold pipe..... 3.75
No. 9. Farrar's Alveolæ Abscess, two gold drop points and one gold charging tube, two hypodermic points and one hub..... 11.50
No. 10. Same as No. 9, two gold drop points, one gold charging tube..... 9.50
No. 11. Same as No. 9, two gold drop points..... 7.50



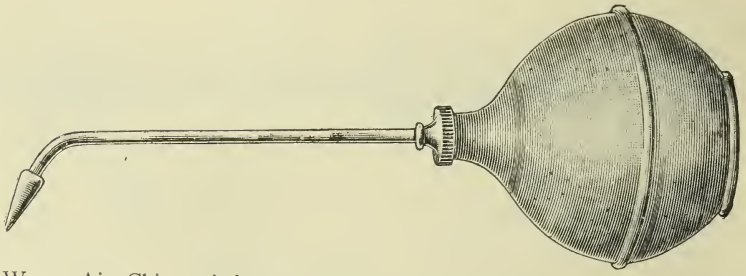
No. 12. Moffatt's Rubber Bulb, two pipes..... $ 1.10



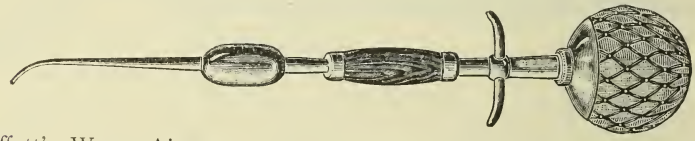
No. 13. Chip Syringe, nickel-plated pipe..... $ .40
No. 14. Same as No. 13, but with oval instead of flat bottom bulb..... .35
No. 15. Same as No. 13, with addition of valve in bulb for rapid air supply..... .50

Syringes.—Continued.

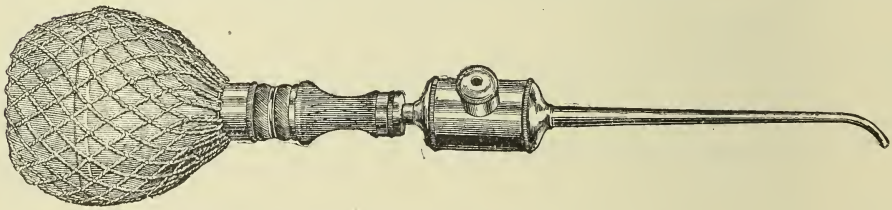
Order by Number.



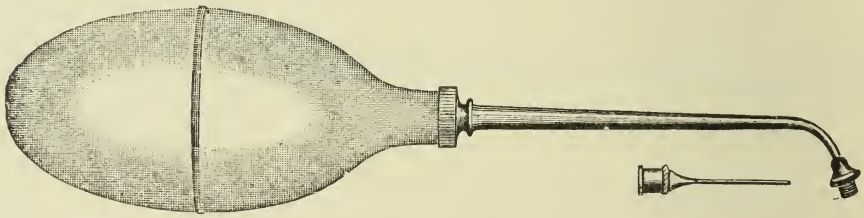
No. 16. Warm Air Chip, reinforced point..... $ .50
No. 17. Dr. S. G. Perry's, similar to No. 16, with addition of sliding shield to protect lip and cheek of patient..... 1.50



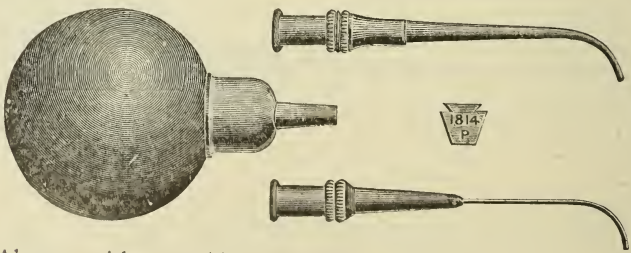
No. 18. Moffatt's Warm Air..... $ 2.50



No. 19. Hot Air, carbon core in heating chamber..... $ 2.90
No. 20. Same as No. 19, without silk netting on bulb..... 2.65



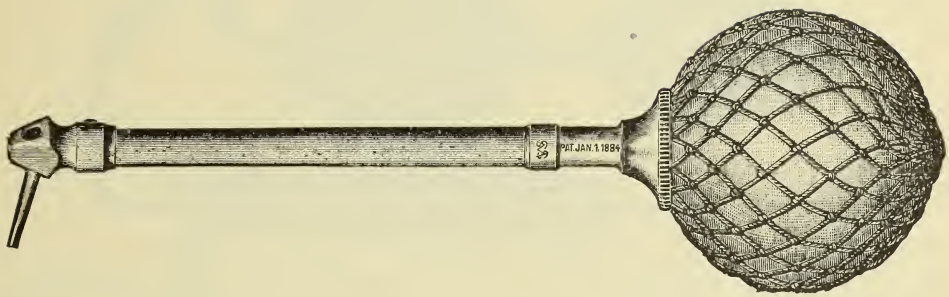
No. 21. Bulb Abscess, with one gold point..... $ 1.50



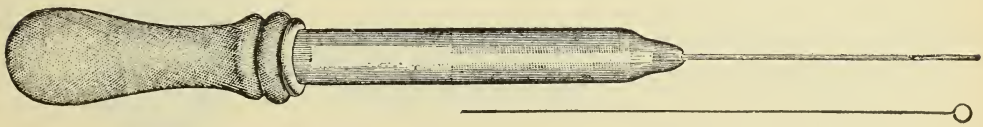
No. 22. Berlin Abscess, with one gold and one hard rubber tube, balance of instrument is rubber, making it safe to use with any fluid; complete as shown..... 1.00

Syringes.—Continued.

Order by Number.



No. 23. The Laskey, quick filling, large intake $2.25



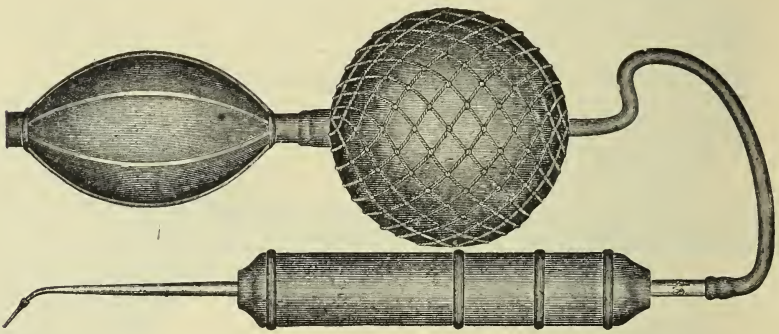
No. 24. Minim, platinum point fused in glass ..... $ .70
No. 25. Dr. D. D. Peabody's, similar to Minim, but of better quality. Pipe is gold, with exceedingly fine point $1.25

No. 26. Asceptic, with platinum point fused in glass and cotton wound piston..... .... .60

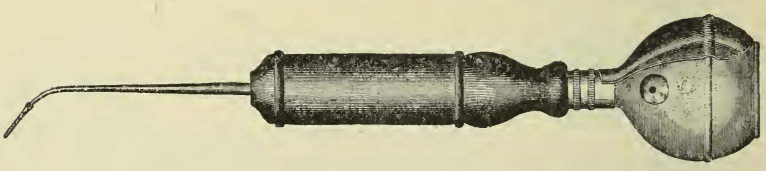
No. 27. Simplex Surgical, complete with one rubber plug ..... .60

Syringes.—Continued.

Order by Number.



No. 29. Continuous Current Hot Air, carbon core in heating chamber. Removable shield for covering hot chamber when in use..... $ 4.00



No. 30. Hot Air, same principle as No. 29, but lacking continuous feature..... $ 3.25

Parts of Syringes.

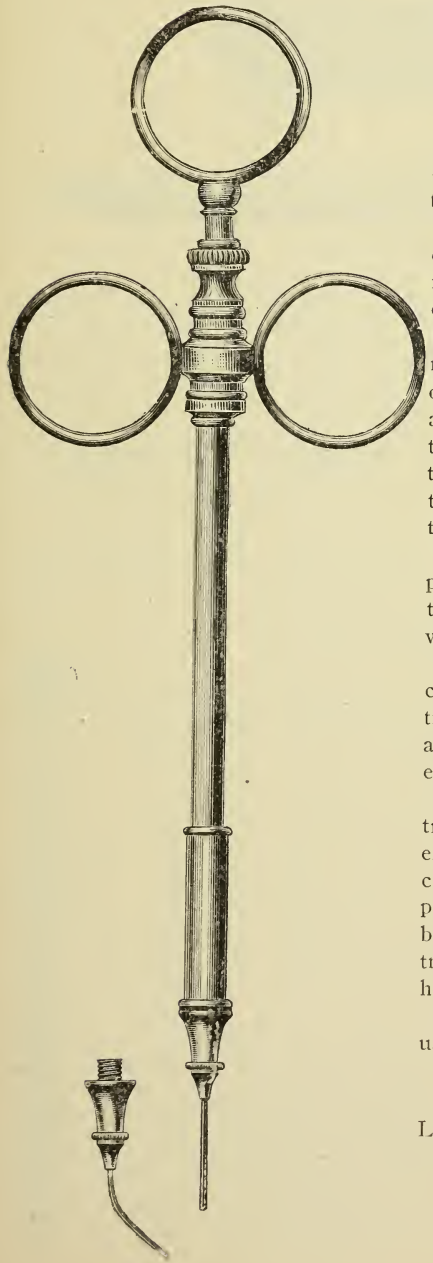
Bulbs (Rubber), for Nos.	12, 18, 27 and 23	each $0.10
" " " "	13	" .20
" " " "	15, 19, 20 and 30	" .30
" " " "	14, 21 and 17	" .15
" " " "	24	" .03
" " (set) " "	29	" 1.00
" " (including hub)	22	" .50
Charging Tubes, for Nos.	9, 10 and 11	" 2.00
Drop Points, " "	9, 10 and 11	" 1.25
Hubs " "	4, 9, 10 and 11	" .50
Nets (silk), " "	12, 18, 23	" .20
Nets (silk), " "	19	" .25
Non-Conductors, " "	18	" .25
Non-Conductors, " "	19, 20	" .50
Plugs (Rubber), " "	27 (per doz., 40 cents)	" .04
Points, " "	4	" .50
" " "	2	" .30
" " "	7	" 1.75
" " "	8	" 2.50
" " "	12	" .25
" " "	13, 15 and 14	" .20
"(Hypodermic)" "	9, 10 and 11	" .20
" (Gold), " "	21	" .50
"(Hard Rubber)" "	22	" .20
"(Hard Rubber and Platinum), No.	22	" .50

Lewis Abscess Syringe.

FOR TREATMENT OF

ALVEOLAR ABSCESS, PYORRHŒA ALVEOLARIS, AND THE IMMEDIATE RESOLUTION OF PERIODONTITIS AND INSIPIENT ALVEOLAR ABSCESS.

(Made by Buffalo Dental Mfg. Co.)



This syringe is so constructed that it can be filled and operated with one hand. The movement of the piston is but one-quarter of an inch, thereby taking up the desired quantity of fluid and no more.

The capacity of the syringe is so small (a few drops only) that it obviates the annoyance of cauterizing the inside of the mouth when using creosote or other strong medicines.

If the opening into the tooth or pulp canal is made to fit the syringe point, the whole contents of the syringe can be discharged into the pulp canal and through the apical foramen and into the fistulous sinus, thoroughly medicating the diseased tract without allowing any of the preparation used to escape into the mouth to cause annoyance to the patient.

In the same manner a few drops of the appropriate remedy may be placed in the pocket between the root and the gum in a case of pyorrhœa alveolaris.

The small amount of fluid contained in this syringe can be pumped back and forth during its application to the tooth or gum-pocket, keeping it in active circulation and insuring its penetration to every part of the diseased tract.

This syringe is almost indispensable in the treatment of inflamed and abscessed roots by the exhibition of peroxide of hydrogen and mercuric chloride, and it is more extensively used for this purpose, perhaps, than for any other. The fact has been established, by the repeated success of this treatment, that periodontitis may be reduced in an hour or two, and alveolar abscess aborted.

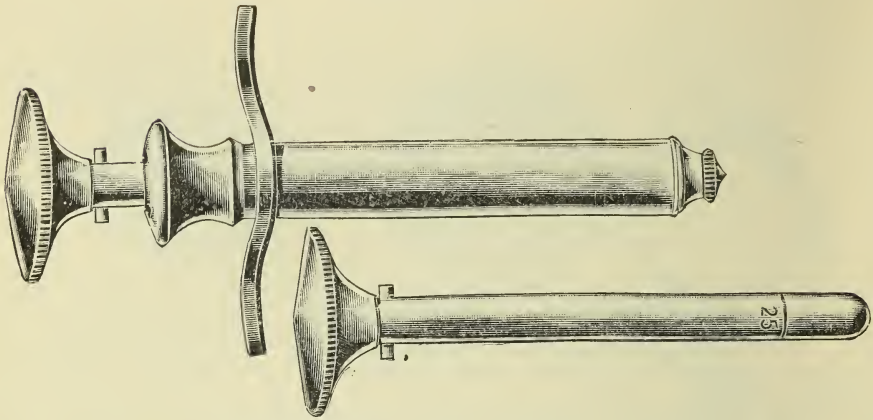
Full directions accompany each syringe for its use in cases of the nature described above.

PRICE.

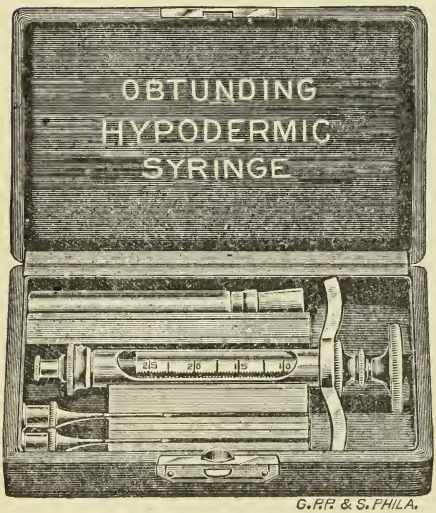
Lewis Abscess Syringe, with two gold points...$3.50

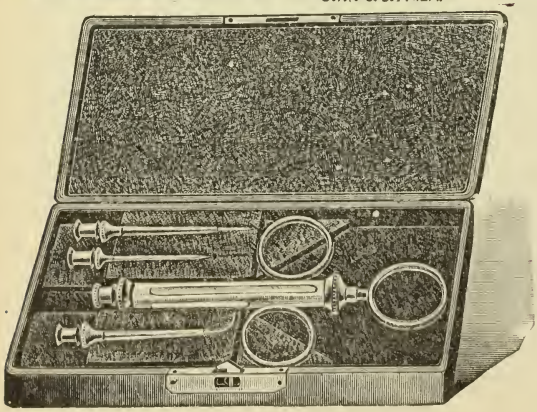
Syringes.—Continued.

Order by Number.



No. 31. All metal Aseptic Packing around plunger, instead of on it.
Price in case $2.00





Obtunding Hypodermic.

No. 32.

This is a strictly dental syringe. Made expressly for our sales. It is the best syringe we can buy. It is provided with patent self-packing device for expanding the piston, and an extra glass barrel with extra packing inserted is included in the price.

Price, complete, with two needles...$2.00

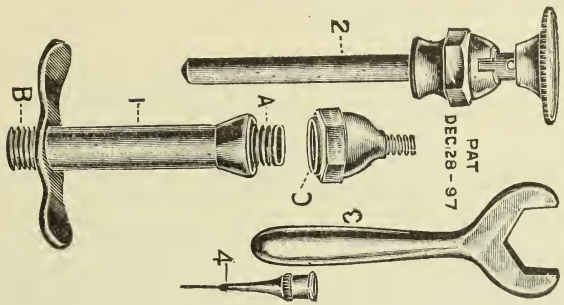
No. 33. Similar to No. 32, but without extra barrel and packing.....$2.00

No. 34. Plain line, with small finger rests $1.50

No. 35. Combined abscess and Hypodermic. One each straight and curved gold pipes, for abscesses, and a heavy, reinforced steel needle for hypodermic use $4.00

Haycock's Anti-Infection Hypodermic Syringe.

Gideon Sibley, Sole Agent.



EXPLANATORY CUT.—No. 1. Barrel of Syringe. No. 2. German Silver Plunger. No. 3. Wrench. No. 4. Needle. A and B. Coarse Thread. C. Annuler Shoulder.

Points of Superiority.

Absolute impossibility of infection if used as directed. Cleanliness, every part being accessible. Strength, being made of superior material, and of such design as to insure it against accident and breakage. No leakage possible—perfect steadiness of the piston, doing away with that jerky motion observed in most other makes. Unlike any glass Syringe, this can be sterilized with boiling water without danger of breakage. The only Syringe on which alcoholic fluids have no effect. The only Syringe which the operator can sterilize without removing the needle. The package or washer being on the outside of the barrel, the solution does not come in contact with it. The piston is made of solid German silver, and is under complete control of the operator, insuring precision in making the injection.

This Syringe is guaranteed against breakage. We replace any part broken (except needles) free of charge.

Price of Haycock's Syringe, in handsome morocco case, with two needles and wrench $3.00

Haycock's Compound Eucaine Tablets.

(Dental Local Anaesthesia.)

Gideon Sibley, Sole Agent.

Being convinced from his own observation, as well as that of many prominent surgeons, both Medical and Dental, that Beta-Eucaine was almost the ideal Dental Anæsthetic, Dr. George B. Haycock experimented long to eliminate its toxicity and otherwise better adapt for surgical use this admirable Anæsthetic.

Using Beta-Eucaine, as a base, he at last succeeded in producing his "Compound Eucaine," which he claims causes no toxic effect, and at the same time it retains all the efficiency of Beta-Eucaine, and is safer and less expensive.

It is made by a leading manufacturing chemist under the Doctor's personal direction; all the component parts being analyzed before being compounded, it is perfectly reliable.

Haycock's Compound Eucaine contains absolutely no cocaine, menthol, carbolic acid, creosote or any ingredient which would cause inflammation. It produces as profound anæsthesia as cocaine, while possessing the following advantages over the latter: it has no toxicity, can be sterilized by boiling, its solutions will keep indefinitely, it has no mydyratic with moderate anti-bacterial action.

The only safe criterion by which to judge of the value of any new medicament, is careful, unbiased and thorough clinical investigation by competent observers. Judged by this standard, Eucaine can be said to have passed the experimental stage and takes rank as the most prominent local Anæsthetic.

For reducing to a solution: place 12 tablets of "Compound Eucaine" and 1 ounce of distilled water in a test tube, gradually bring to a boil, put in a bottle and keep well corked. Absolutely safe, perfect and prompt anæsthesia is sure, with no bad after-effects.

Price, per box of four tubes—sufficient for the extraction of 240 Teeth....$2.00
Sample tube, 15 tablets ..... .50

Hypodermic Needles and Syringe Tubes.

Ever since dentists began to use the Hypodermic Syringe for local anæsthetics we have made a specialty not only of hypodermic syringes, but of hypodermic needles as well.

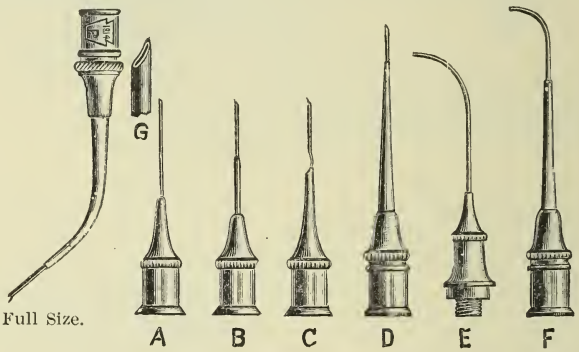
The needles we sell are standard.

It is possible to make a needle that looks just as well as our needles, and sell it for less money than we ask for these needles, but the quality can't be there.

No dentist can afford to experiment.

If we could get a dollar apiece for needles, we couldn't give any better quality.

Our needles are made of the finest obtainable grade of Seamless tube. They are highly tempered, and have very fine concave points.



	Each.	Per Doz.
A.—Plain Seamless Steel Needle, nickel-plated	$ .15	$1.25
B.—Reinforced Steel Needle, nickel-plated	.20	2.00
C.—Obtunding Reinforced Needles, securely fastened in our improved reinforced hub, which is made of one piece, thus avoiding all possibility of leakage	.25	2.50
C 1.—Same—Solid Gold or Platina	.75	7.50
D.—Craft's or St. Louis Needle, consists of a tapering tube in which is soldered a short, blunt-pointed Steel Needle, is easily kept clean	.35	3.50
E.—Solid Seamless Gold Abscess Needle, straight or curved	.90	9.00
F.—Solid Seamless Gold Lewis Abscess Needle, straight or curved	.80	8.00
G.—Illustrates blunt point on all Dental Hypodermic Needles (not abscess). This style will always be furnished unless otherwise ordered.		
H.—Pipe for Nickel Dental Syringe, straight or curved	.25	2.75
K.—Pipe for Moffatt's Water Syringe, straight or curved	.25	2.75

Half-dozen of one style at dozen price; less than half-dozen at single price.

Unless special thread is designated, we will fill all orders for needles with standard screw hubs, although we are prepared to furnish needles to fit all styles and makes of syringes.

Hypodermic Needles in Gross and Half-Gross Lots.

We will make very material discounts from above prices for gross and half-gross orders. Write for quotations.

Syringe Repairs.

A capable man is required to properly repair a hypodermic syringe. We have none but capable men in this department. It doesn't make any difference in what condition a syringe reaches us. It is actually as good as new when we return it. The charges will depend upon the amount of work required, but are always reasonable.

For inserting heavy new barrel and new packing the price is 50 cents.

Custer Electric Gold Annealer.

Sole Agent, The Ransom & Randolph Co., Toledo, O.

This instrument has been devised for annealing gold, and can also be used for tempering instruments and warming gutta-percha. The heat is obtained by electrically heating coils of platinum wire which are imbedded in the surface of the tray.

It possesses the following advantages:

First.—The heat being radiated from an electrically heated noble metal, is entirely free from the products of combustion, and the purity of the heat is thereby assured.

Second.—The heat is high enough for thoroughly annealing all forms of gold, and the wiring is so arranged that a rheostat is not required.

Third.—The heat is practically the same all over the surface, and the gold is thereby evenly annealed.

Fourth.—It saves time. It requires no attention, and the surface being rough, the operator is enabled to pick up the gold with the plugger-point instead of the pliers.

Fifth.—The slab which covers the tray when not in use may be warmed for softening gutta-percha upon by turning the current on for a few moments.

The ELECTRIC ANNEALER is in use by the best operators in the land; in fact, the best gold operations cannot be made without perfect and clean annealing of the gold. Gold not only works with perfect uniformity, but fillings made of electrically annealed gold do not flake off.

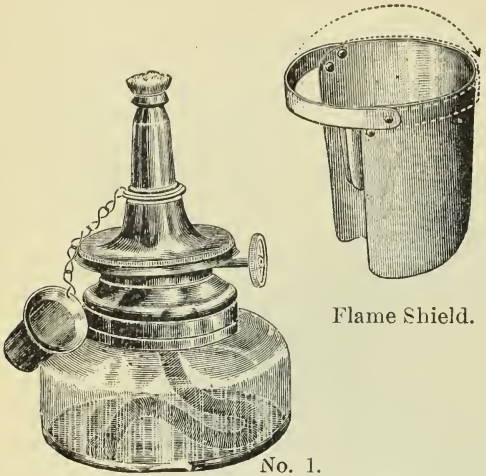
The ELECTRIC ANNEALER can be operated by any current used for incandescent lighting, the 110 or 52-volt current, the constant or alternating current. It cannot get out of order, and will last a lifetime. It is connected in the usual manner to a chandelier, wall bracket, or switch, and costs but little to operate.

Each annealer is wound for but one current. When ordering, specify the current on which the annealer is to be used.

Size of top, 5½ inches by 4½ inches. Height, 2 inches.

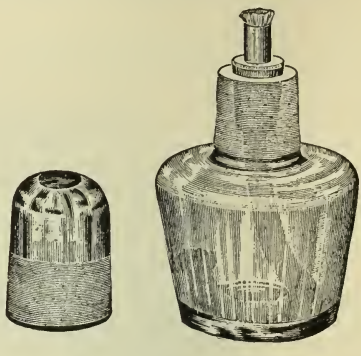
Price $16.00

Alcohol and Annealing Lamps.



Flame Shield.

No. 1.



No. 3.

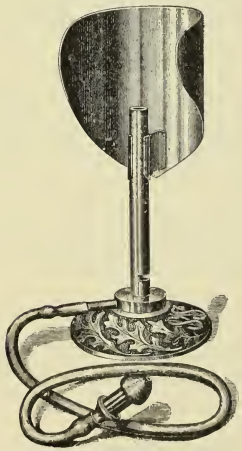
No. 1. The glass portion is 2½ inches diameter, 1 inch deep.
No. 2. Same as No. 1, except depth of glass, which is 1¾ inches.
No. 3. Ground glass cap, to prevent evaporation. 3¼ inches deep, 2 inches diameter.
No. 4. Same as No. 3, but 3½ inches high, 2½ inches diameter.
No. 5. Same as No. 3, but more of an oval shape. 4¼ inches high, 3 inches diameter.

PRICES.

Nos. 1 and 2, without flame shield	$0.30	No. 3	$0.20
" 1 and 2, with flame shield	.60	" 4	.25
Flame Shield only	.30	" 5	.50

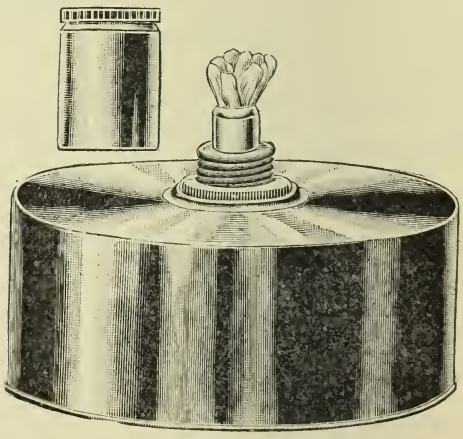
Model Annealing Burner.

Cut Half Size.



This Burner is so constructed as to secure perfect combustion, giving a clear blue flame, of convenient size and proper temperature for annealing purposes. The shield may be adjusted at any height to suit the operator, or it may be lowered so as to completely expose the flame. Height 2½ inches; diameter of base 1⅝ inches. Nickel-plated all over.
Price $1.00

Capital Annealing Lamp.



The cut shows the lamp full size. It is the most convenient for the student's case, occupying less space vertically than any other of our alcohol lamps.

Leather washers make it entirely secure from leakage in any position. Made of brass, nickel-plated, and finely finished.
Price $1.00

Wicks for Alcohol Lamps.

Round, close woven wicks for alcohol lamps. Three for five cents.

The Modern Sterilizer.

Made by Lee S. Smith & Son, Pittsburg, Pa.

This is a sterilizer for dental instruments. Most sterilizers are made to use in the laboratory. This is made to use in the office. It is made for your patient to look at. It is made to hang on the wall of your office as near the front of your chair as you can get it. The brass plate with the black letters on it is not put on the front of the boiler to advertise Lee S. Smith & Son; it is put there for the effect the word Sterilizer is bound to have upon your patient.

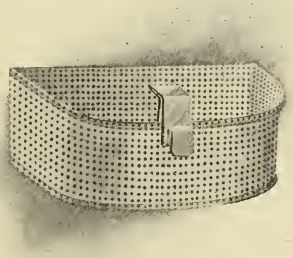
That is the theoretical side of it.

The Modern Sterilizer

is as good practically as it is theoretically. It is made of burnished copper, the back is reinforced by a piece of heavy asbestos board. It is nine inches wide by twelve inches high; the upper half is the boiler or water chamber, the lower half is the burner chamber. A Bunsen burner is furnished with the outfit, but it may also be operated by an alcohol lamp.

The mica in the door to the burner chamber is transparent; if a small flame is kept burning in sight of your patient, your patient doesn't have to be told you are in the habit of sterilizing your instruments. He can see for himself.

The tray shown in the side cut is for inserting and removing instruments from the boiler. It is large enough to hold six or eight pairs of forceps.



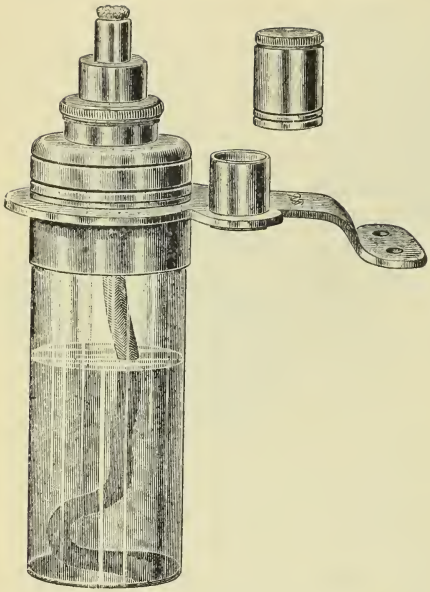
Price, complete.....$6.00

Sold with an ironclad money-back guarantee if not satisfactory in every way.

The Down's Sterilizer.

The Down's Sterilizer is enclosed in a jacket of sheet zinc. It is a practical apparatus, and if the operator prefers to do his sterilizing in the laboratory, is just as effective as any.

Price, Sterilizer, without Burner.....$3.00
Price, Sterilizer, with No. 17 Burner, less Shield..... 3.70
Price, Sterilizer, with No. 12 Burner..... 3.50



Alcohol and Annealing Lamps:—Continued.

Kells Bracket Table Lamp.

The engraving tells what this lamp is for. There isn't any danger of upsetting it, and it doesn't take up any room on the table.

The lamp is convenient, economical and durable. It is out of the way; it is vapor-tight and the shape assures the confinement of the alcohol close around the wick. It is substantially made throughout. All metal portions nickel-plated.

Price..... .....\$1.00
Shield for same ..... .30

Annealing Tray No. 3.

This tray is made for use on Model Annealing Burner, shown on page 295. The mica disk is 1½ inches in diameter, the stem 2 inches long.

Price..... .....\$0.40

Annealing Tray No. 4.

For use with Gas Burners 17 and 20. It is similar to No. 3, but is larger, and is supported by two arms instead of one. It can be used for annealing gold or for softening gutta-percha. It has a mica disk for the former purpose, and one of soapstone for the latter. The soapstone plate has a button of low-fusing metal in a pocket at its center. When the button melts the heat is right for a medium heat gutta-percha.

Price, complete, with Soapstone and Mica Disks.\$0.75

Annealing Tray No. 5.

Annealing Tray No. 5 is for use with Nos. 1 and 2 Alcohol Lamps, page 295. The mica disk, which affords a large annealing surface, is loose, resting in the circular frame and held in place by the raised edge.

Metal parts of brass, nickel-plated.

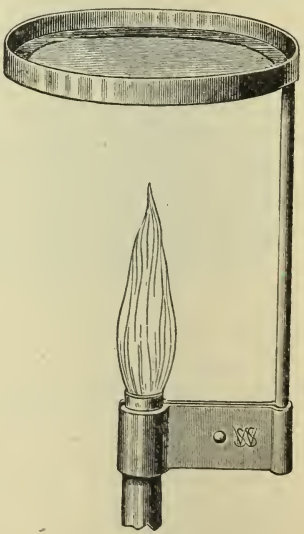
Price..... .....\$0.75

Annealing Tray No. 6.

A shovel-shaped sheet of mica, nearly 3 inches square, intended for use with a cone-socket handle.

The mica is held in a metal frame, with screw-stem for attachment to the socket-handle. The size of the sheet affords a large annealing space. The handle does away with all risk of burning the fingers. A new mica sheet can be slipped into the frame whenever necessary.

Price..... .....\$0.40



Annealing Tray No. 3.
Cut nearly full size.

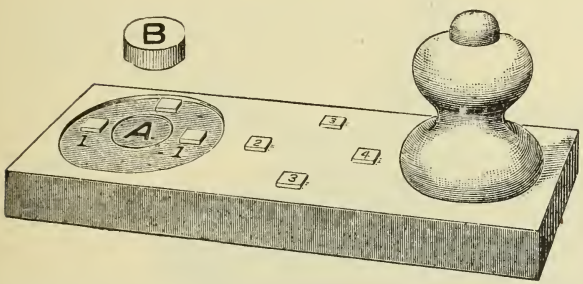
The S. S. White Annealing Lamp.

This outfit consists of a lamp similar to No. 3, on page 295, mounted on a base of ebonized wood.

It includes an upright rod, carrying a metal annealing tray.

Price, complete $2.25

Dr. How's Thermoscopic Heater.



The only way gutta-percha can be properly heated is by the use of this heater. It does away with guess work. It is scientific.

Made of steatite, with a wood handle and fusible buttons, A for low-heat and B for high-heat gutta-perchas. A held over the flame melts at 212° F.; B at 230° F. Pellets of "Premium" Gutta-Percha placed at 1, 1, will be softened properly when the button A melts. The heater can then be set on the bracket-table. Low-heat Gutta-Perchas can be placed at 2, 3 and 4, according to their softening points. For "Excelsior" Gutta-Percha the A button is poured out and the B substituted.

Price $0.30

Bogues' Lamp and Warm-Water Cup.

A framework of brass upon a brass base supports a boiler of ornamental design beneath which the lamp is placed. At one side of the boiler, which holds a pint of water, is a socket or scabbard to hold the mouth-mirror, which is thus always kept warm. When desired, the boiler can be substituted by the annealing tray.

This outfit is designed to afford a constant supply of tepid water for syringing out cavities; to keep the mouth-mirror at about the temperature of the body, so as to prevent the condensation of moisture on its surface when placed in the mouth; to anneal gold, and to soften gutta-percha.

Price, complete $7.50

Flagg's Improved Gutta-Percha Softener and Tool Heater.

A dry-heat apparatus, with provision for three different degrees of heat adapted to various makes of gutta-percha. The heating chamber consists of a metal cylinder open at the bottom for the entrance of the flame of the lamp. Mounted upon the cap are two metal plates, one above the other, giving two additional heating surfaces.

There is a rack for holding instruments. The height of the heating surfaces above the flame can be changed as desired.

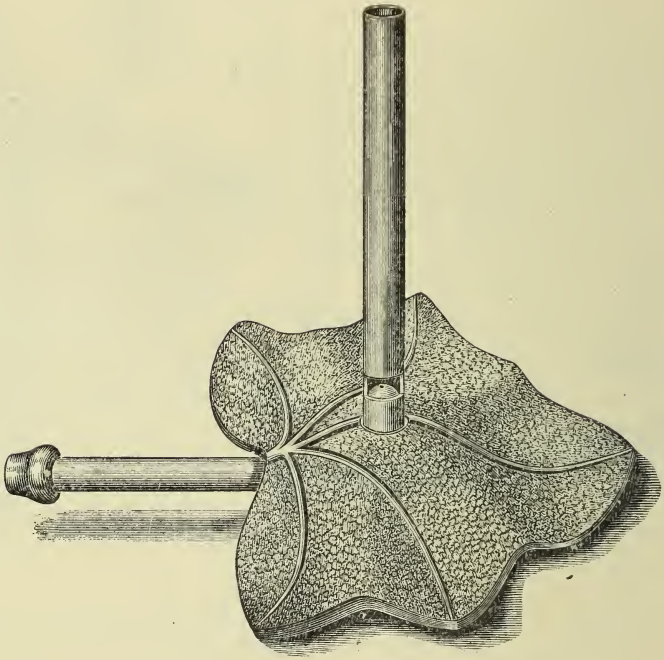
Two additional attachments are a boiler holding about half a pint, intended for keeping a small supply of tepid water ready for use, and a plain-top, nickel-plated annealing tray for gold foil.

PRICES.

Complete, with Warm-Water Cup and Annealing Tray No. 1	$6.50
Gutta-Percha Softener and Tool-Heater, separately	5.00
Warm-Water Cup, separately	1.00
Annealing Tray No. 1, separately	.50

The Ivy Burner.

Made by H. D. Justi & Son.



For Gas Annealing. No Peeling of Nickel.

It is made of a non-oxidizing white metal which admits of a very bright polish, and in finish very CLOSELY RESEMBLES SILVER, consequently will not assume that unsightly appearnce which all nickel-plated burners acquire after they are in use a short time. It is also a very strong and ductile metal.

The burner gives a fine blue flame, which can be increased from the smallest to about five inches.

This is by all odds the best and neatest burner ever offered.

Price.....$0.50

Whitney Annealing Lamp with Mica Tray.

(IMPROVED.)

The Annealing Lamp illustrated was designed many years ago by the late Dr. B. T. Whitney, and has always maintained its superiority over other lamps used for the purpose. We have recently reconstructed the entire lamp, still retaining the general features of the original. A new glass font, holding more alcohol and having a broad base, has been substituted for the old one. An entirely new wick holder and tray support have been used; but the most useful and marked improvement has been in the insertion of a two-inch disk of mica in the annealing tray. This last feature will appeal to dentists who use mica for annealing purposes exclusively.

All the metal parts are nickel-plated.

PRICE.

Whitney Annealing Lamp, improved.....$1.00

Students' Annealing Lamp.

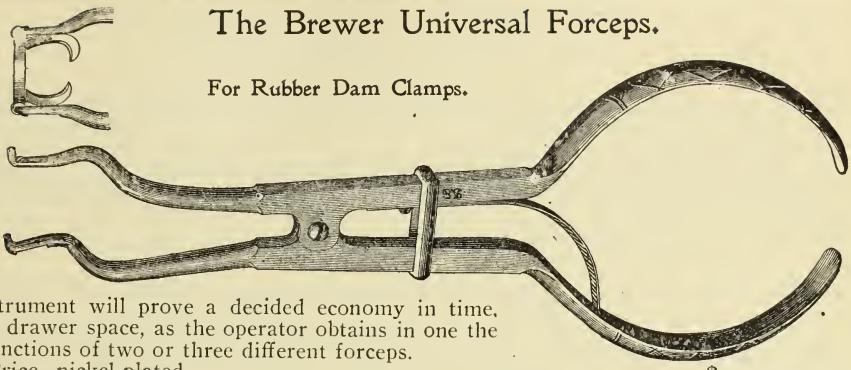
This Annealing Lamp was suggested by Prof. A. P. Southwick, of the University of Buffalo, for the use of students in that college. It is constructed entirely of brass. The lamp is surmounted by the same style of brass frame for holding the tray as is used on the Whitney Annealing Lamp.

PRICE.

Students' Annealing Lamp.....$0.80

The Brewer Universal Forceps.

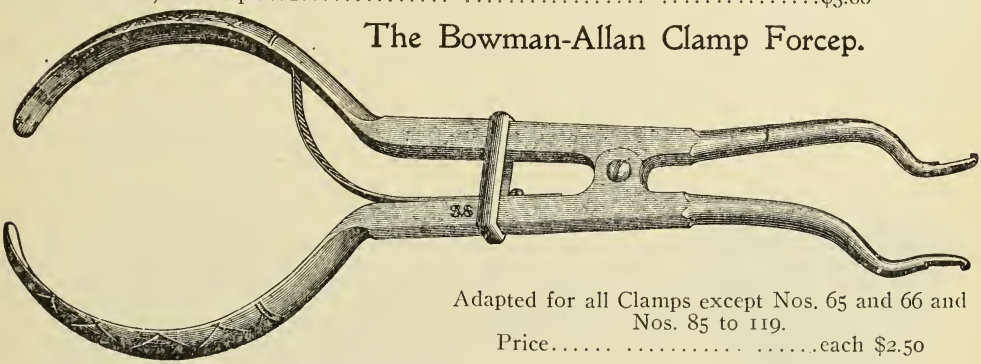
For Rubber Dam Clamps.



This instrument will prove a decided economy in time, money and drawer space, as the operator obtains in one the working functions of two or three different forceps.

Price, nickel-plated.....$3.00

The Bowman-Allan Clamp Forcep.



Adapted for all Clamps except Nos. 65 and 66 and Nos. 85 to 119.

Price.....each $2.50

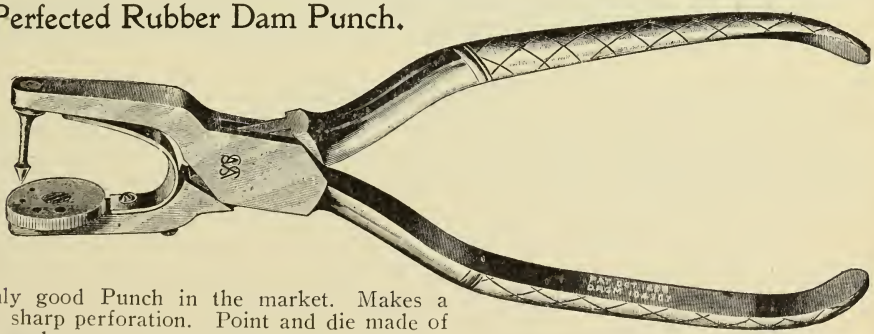
Dr. Delos Palmer Clamp Forceps.

For Clamps Nos. 85 to 116.

Price, nickel-plated, either style, per pair.....$2.50

We have a cheaper Clamp Forcep, similar in style to the Bowman-Allan. Price, each, $2.00

Perfected Rubber Dam Punch.



The only good Punch in the market. Makes a clean and sharp perforation. Point and die made of hardened steel.

Price, nickel-plated.....each $3.00

Gold Foil Scissors.

Foil Shears, 9 inch.....$2.00
Foil Shears, 8 inch, Japanned, Pointed..... 1.00
Foil Shears, 8 inch, Japanned, Blunt..... 1.00
Foil Shears, 8 inch, Polished, Blunt..... 1.00
Foil Shears, 8 inch, Polished, Pointed..... 1.00

Dr. Kelly's Cervix Fluid.

Gideon Sibley, Sole Agent.

This preparation will make and keep the gums as dry as parchment, Dr. Kelly claims, hence does away with the discomforts of Rubber Dam and Clamps in filling cervical cavities and setting Logan and other crowns.

It contains no acid, does not injure gums and tooth structure, like the different acetic and other acids. It makes such operations more agreeable to all, but especially nervous patients.

Price, per bottle, with full directions.....$1.00

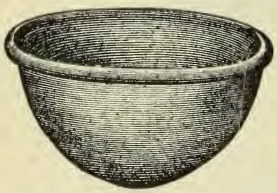
Allen's Illuminated Rubber Dam.

The Illuminated Rubber Dam is a high-class rubber dam, with one surface coated with aluminum. The coating gives it a silvery white appearance, with a fine reflecting surface. When adjusted to the teeth, it lights up not only the cavity of decay but the entire surrounding parts.

The coating is so applied that it will not come off.

Made of best quality roll rubber dam, 6 inches wide, medium weight only. Put up, yard and half-yard rolls, in white pasteboard boxes.

Price.....per yard roll $2.25
Price.....per ½ yard roll 1.13



Denham's Coffer Dam Shields.

The material of these Shields is elastic rubber similar to the rubber dam, for which they will, in many cases, prove a convenient substitute, especially where it is difficult to apply the rubber dam, and when it is necessary to treat the teeth with medicaments.

The Shields may be used with Rubber Dam Clamps.

Price, per box of one dozen.....$0.60

Rubber Dam Punches.

Triplex No. 1, nickel-plated.....each $1.00
Triplex No. 2, nickel-plated..... 1.50

Dental Speculum.

The Dental Speculum affords the dentist an unobstructed view of the interior of the mouth, and when once adjusted leaves both hands free. It lets the light freely into the mouth, and its polished surfaces aid by reflection. It holds the lips out of the way, and is comfortable to the patient. It serves as a protection to the lips and cheeks during operations.

Price, nickel-plated and polished.....$0.35

Elliott's Cheek Distender.

Designed to distend the cheeks of a patient during operations on the teeth. Its bow of spring-wire and the cheek-pieces are polished and nickel-plated, which help to reflect light on the teeth. As the spring is not stiff, it is used with very slight inconvenience to the patient.

Price.....$1.00

Lip Protector.

The advantage of this device was suggested by the use of the ordinary Cheek Holder. It is found very useful in protecting the lips from being chafed, when using either files, drills or excavators.

Price, nickel-plated.....$0.35

TRAUN'S IDEAL RUBBER DAM.

It comes now with the new "Sealskin" finish.

Our famous Rubber Dam is now made with the new "Sealskin" finish. This finish has obvious advantages.

You need only to handle this rubber to appreciate them.

It makes the dam beautifully smooth, soft, easily managed and handled, and pleasant to the touch. It does not feel clammy or sticky. It does not become over-tough, breaking when drawn over a large clamp, but remains elastic, stretching farther than before.

Otherwise it is still the same good old "Ideal" Dam. You know its merits, but "a good tale will bear telling twice."

By our process this rubber dam has been vulcanized in such a way as to render it **practically odorless**—it has none of that **nasty sulphuric smell.**

You appreciate the importance of making everything as agreeable and as pleasant to your patients as possible.

You can use our new seal skin finish "Ideal" rubber dam with the assurance that it will be pleasanter in the mouth of the patient than any other dam made.

This rubber dam is a good deal better than any other dam made.

It is just as tough and durable as it is possible to make any rubber dam.

The seal skin finish dam has all the merits of any rubber dam, and has a number of manifest merits of its own.

TRAUN'S "IDEAL" RUBBER DAM
SPECIALLY PREPARED FOR DENTAL PURPOSES FROM PURE PARA RUBBER OF THE FINEST GRADE
TRAUN RUBBER CO. Successors to EXCELSIOR RUBBER WORKS, Manuf'rs
NEW YORK, U.S.A.

One of those merits is its light color. On this account it **does not absorb the light** like the old dark colored kinds. This is important when working in the mouth where all the light possible is needed.

The "Ideal" Dam with the seal skin finish costs no more than ordinary kinds of rubber dams not so good.

It is cheaper for you to buy, because it does not deteriorate for years. You can always use up every bit you have. Nothing need be wasted.

The prices of our new "Ideal" seal skin finish are as follows, each can holding a full square yard, cut 6 inches wide, 18 feet long:

Light	$1.00 per can.
Medium	1.50 per can.
Heavy	2.00 per can.

We also put up the medium weight in $1.00 cans holding two-thirds of a yard.

If you find it more convenient to use the Dam in 5 in., 7 in., or full width, you can have it that way, unless specified, we send 6 in. rolls.

Davidson's Dental Dam.

Made from selected Para Rubber. By selected we mean that whenever we come across a particularly fine lot of Para Rubber we lay it on one side for use in our dam. Then the lot is carefully picked over and only the best pieces are reserved. By this means we are enabled to present to the profession a dam that is as near perfect as it is possible to produce. This dam is sold all over the world and unless our claims for its toughness and durability were justified it certainly would not have so wide a market. Try it and see for yourself. All first-class dealers handle it, or write to us and we will direct you where to find it.

PRICES:

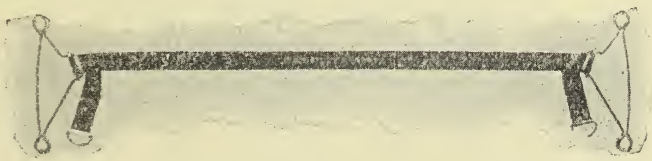
Light, per roll, ½ yd. wide	$0.75
Light, per roll, 1 yd. wide	1.25
Medium, per roll, ½ yd. wide	.80
Medium, per roll, 1 yd. wide	1.50

DAVIDSON RUBBER CO., Boston, Mass.

SIMPLE. PRACTICAL. DURABLE.

Dr. S. E. Knowles'
Rubber Dam Spreader.

Patented July 27, 1897.



No implement for spreading the dam can be made practically successful unless guarded on each extremity by an elastic substance, as the dam will creep on the unguarded metal until it is punctured and its usefulness as a spreader destroyed. This point is fully protected by the patent.

ITS ADVANTAGES ARE:

FIRST—Complete exposure of the parts to be operated upon, the free edges and ends of the dam being entirely out of the way.
SECOND—Facility in adjusting the tension on the dam and head band.
THIRD—Entire freedom from slipping on, or puncturing of the dam.
FOURTH—Absence of necessity for use of weights.
FIFTH—Equalization of tension of the dam upon the face, making it the most comfortable appliance for the patient ever devised.

It is all right. Try it for ten days, and if not satisfactory return to your dealer and get your money back.

Price.....$1.25

Sole Agent,

JAS. W. EDWARDS,

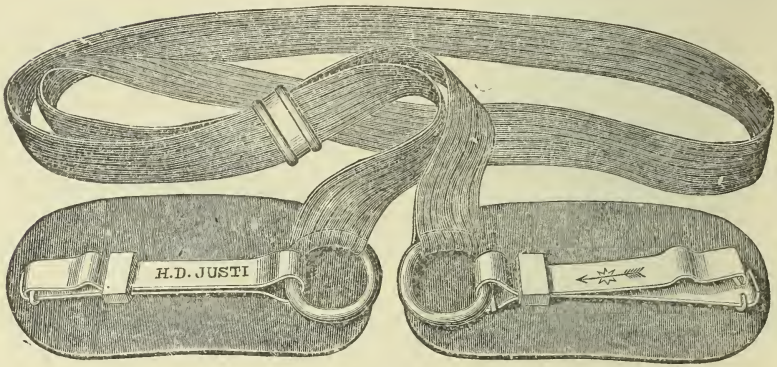
Dental Supplies,

825 Market Street, - San Francisco, Cal.

Improved Rubber Dam Holder.

Dr. Cogswell's Design.

H. D. Justi & Son, Philadelphia-Chicago.



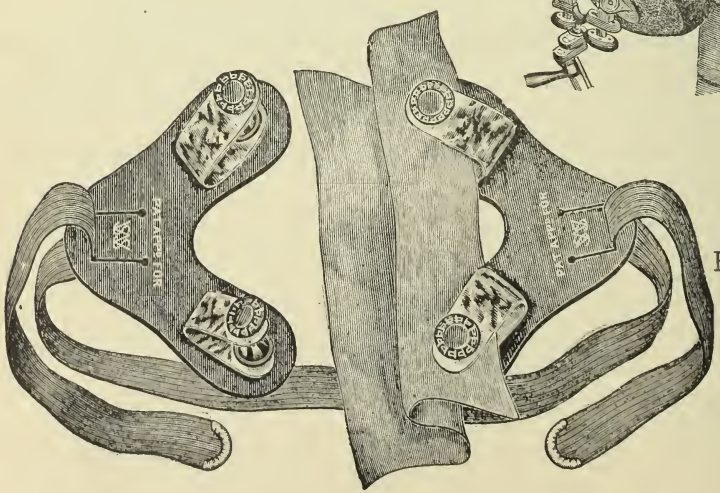
PRICES.

Plain, with Slide (shown in cut) or Ring without guards	$ .60
Plain, with Slide (shown in cut) or Ring with horn or amber guards	1.00
Plain, with Slide (shown in cut) or Ring with ivory guards	1.50
Putting best new silk braid on holder	.25
Narrow gum braid for plain holder (18 inches)	.10
Wide gum braid Cotton, for holder as shown (18 inches)	.10
Wide gum braid, Silk, for holder as shown (18 inches)	.20
Slides for holder shown ..... each	.12

Novel Rubber Dam Holder, Nos. 4 and 5.

PRICES.

No. 4, Two Clips, Wide Cotton Gum Braid with Slide	$1.15
No. 5, Four Clips, with Cotton Gum Braid and Double Slide	2.25



The Carmichael Rubber Dam Holder,

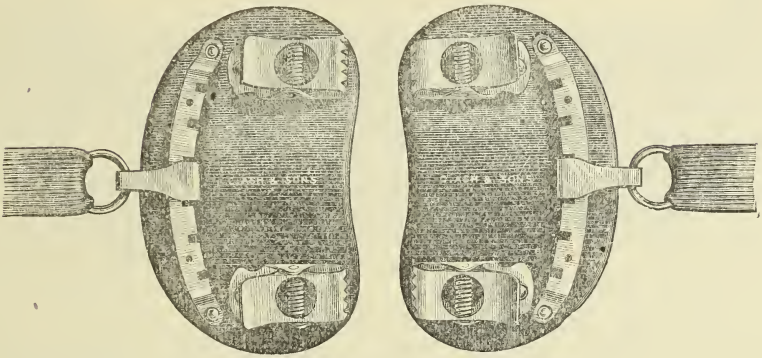
made of thin, polished, black vulcanite, and has glove snap-buttons with tortoise-shell celluloid springs.

Price .... each $1.00

RUBBER DAM HOLDER.

With Adjusting Ratchets.

Dr. W. Mitchell's.
Made by C. Ash & Sons.



Dr. Mitchell thus speaks of this novel and useful Holder:—

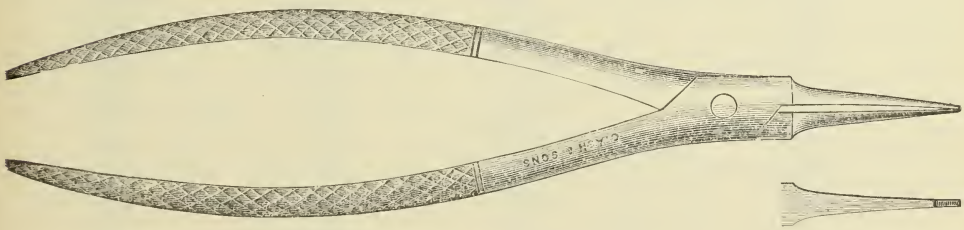
"The advantages of the Rubber-dam Holder are too apparent to need much description. Its capacity is that of both rubber-dam and napkin holder, and in many cases weights may be dispensed with. The adjusting ratchet is an important improvement over all other methods, enabling the operator to produce traction in any desired direction —something that has long been needed. To the practical dentist further description would be superfluous."

Rubber-dam Holder, with vulcanite guards, elastic braid and nickel-plated clips and ratchets $2.00

Nerve Canal Pliers.

Straight and Curved.

Made by C. Ash & Sons.



For Removing Broken Drills from Root Canals, etc.

Price of Pliers, Straight or Curved, Nickel-plated. .....each $2.00

Root Reamers.

Designed by Dr. J. Leon Williams.
Made by C. Ash & Sons.

S. L.

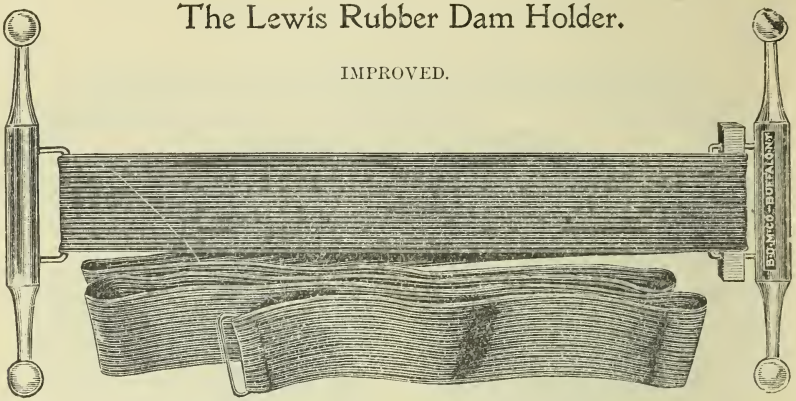
Unlike the ordinary three-sided reamers, these instruments are grooved, which renders them self-clearing. They cut rapidly, never clog, can be sharpened on an oil-stone as easily as an excavator, and can thus, without difficulty, always be kept in the finest cutting condition.

If used with care there is no danger of forcing them through the sides or ends of roots, moreover they make a large cone-shaped opening, which gives plenty of room for working, and is of the best possible shape for the reception of such tapering dowel-pins as the one designed by Mr. Nash, of Inverness. Made in two sizes, S—small, L—large.

Price for any Handpiece, either size.....each $ .50
Price for any Attachment, either size.....each .50

The Lewis Rubber Dam Holder.

IMPROVED.



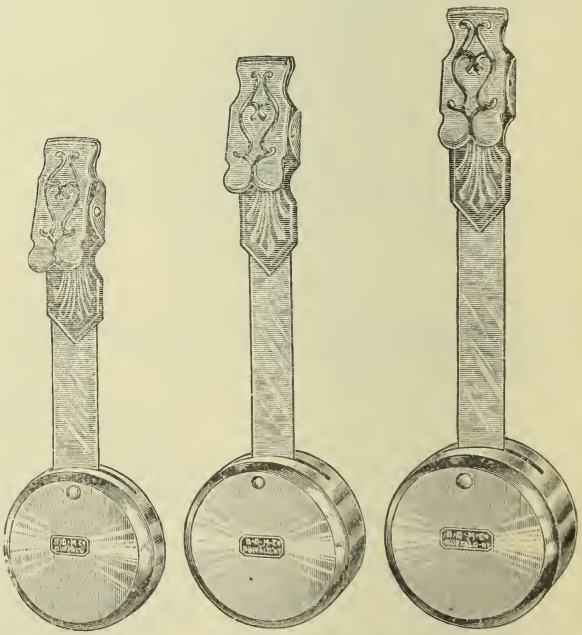
Made in two lengths, $2\frac{3}{8}$ inches and 2 inches, with new square moveable bar.

Price, Lewis Rubber Dam Holder, nickel-plated.. .....$0.60

Buffalo Rubber Dam Weights.

The Buffalo Dental Manufacturing Company were the first to introduce rubber dam weigths of any description. Their utility was at once recognized, and various modifications of the original Lewis weight have from time to time made their appearance. We now offer a new rubber dam weight, that is simple in construction, neat in appearance, and convenient in application.

It consists of a metal disk depending from a flexible strip of brass, which is surmounted by a spring clasp for attachment to the rubber dam. The whole is polished and nickel plated. The weights are made in three sizes—small, medium, and large. Cuts are full size.



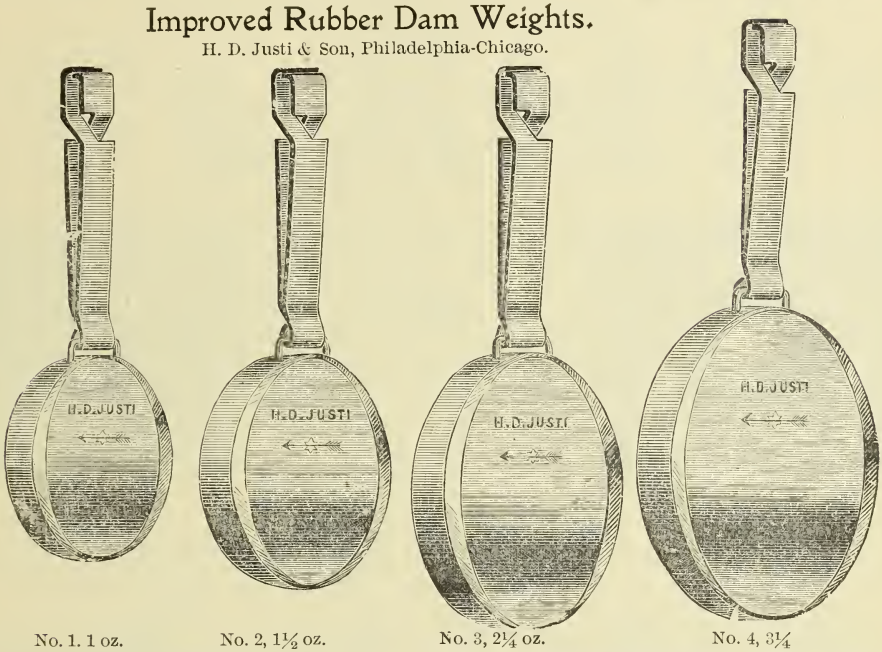
Small. Medium. Large.

PRICES:

Buffalo Rubber Dam Weights, small, each	25 cts
Buffalo Rubber Dam Weights, medium, each	30 cts
Buffalo Rubber Dam Weights, large, each	35 cts

Improved Rubber Dam Weights.

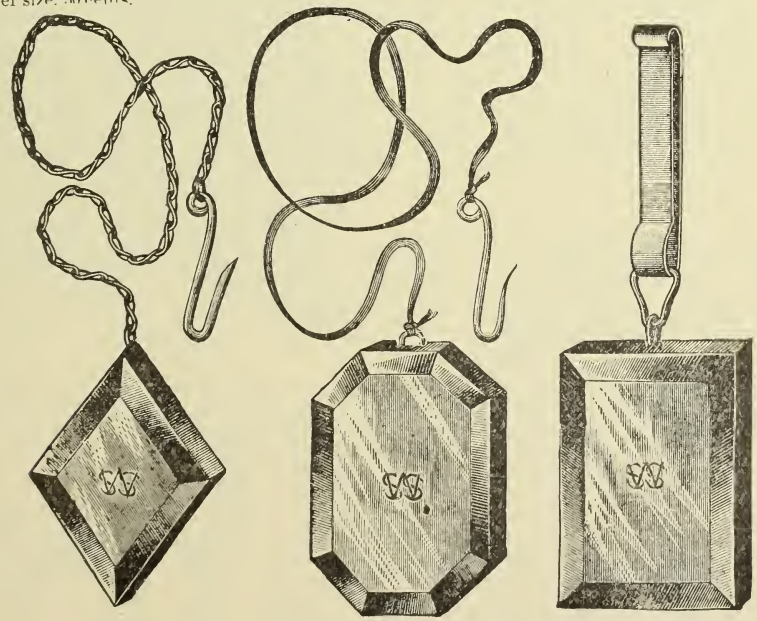
H. D. Justi & Son, Philadelphia-Chicago.



No. 1. 1 oz. No. 2, 1½ oz. No. 3, 2¼ oz. No. 4, 3¼

These weights are attached to the loose ends of the Dam, so as to keep it out of the operator's way, and from annoying the patient.

They are of solid metal, nickel-plated; the springs are more readily attached or detached than any others. Price of either size, 50 cents.



5 6 7

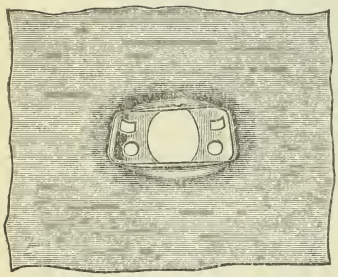
Made of Brass, Nickel-plated, with Silk Braid, Chain or Spring Clip.

PRICES.

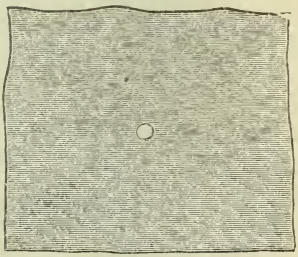
Nos. 5 to 7, with Silk Braid and Hook	each	$0.35
Nos. 5 to 7, with Nickel-plated Chain and Hook	each	.40
Nos. 5 to 7, with Nickel-plated Spring Clip	each	.50

It don't take many words to describe

THE IVORY CLAMP

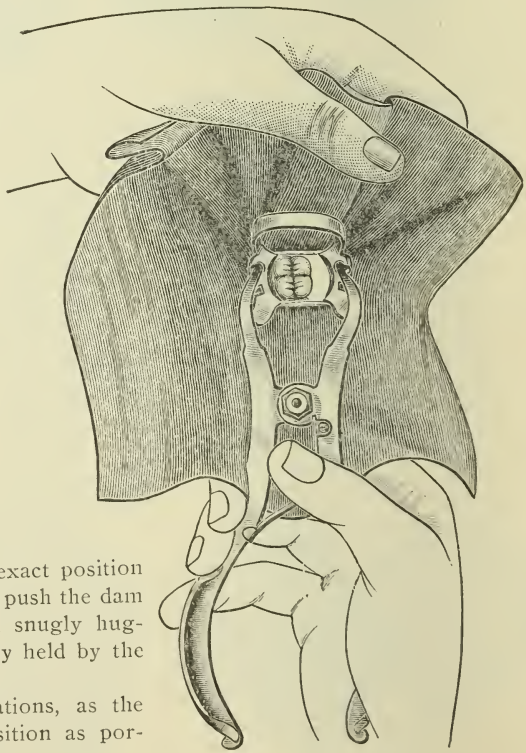


to the dental profession, if they follow the description and accompanying illustrations. Every dentist must be at least fifty per cent. mechanical, and as this clamp is a mechanical device, he can and will readily understand and appreciate its worth and superiority, as soon as his eye rests on these illustrations.



Its Good Points when in the Dentist's Hands are Manifold.

The ease with which the dam is carried by the clamp, and placed over the tooth to be operated on, causes neither annoyance nor pain to the patient.



The Way the Clamp is Grasped by the Forceps

enables you to locate the clamp in the exact position you desire, and when this is done, simply push the dam from the flanges, and you find the dam snugly hugging the neck of the tooth, and as snugly held by the clamp.

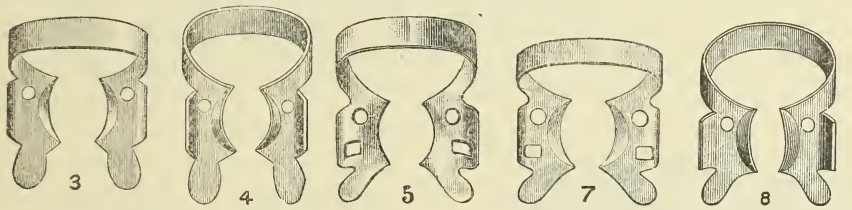
There is no deception in the illustrations, as the Ivory Clamp is as easily placed in position as portrayed by the cuts.

See different designs on following pages.

Patented June 12th, 1888, - April 2d, 1889, - January 23d, 1894.

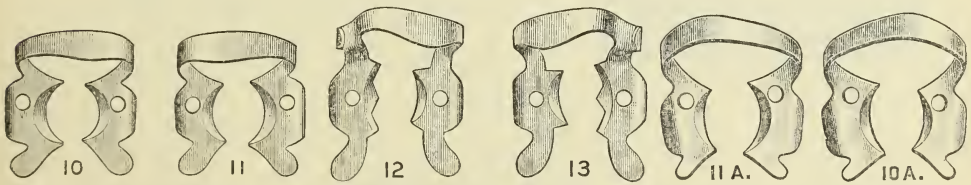
EACH.

No. 00. Very small bicuspid, used also as a lateral incisor $0 80
" 0. Small bicuspid, also used frequently on lateral incisors and cuspids 80
" 1. Bicuspid clamp, festooned in the jaws to hold rubber and gum deep on neck of the tooth 80
" 2. Bicuspid, general 80
" 2a. For superior bicuspids and small third molars 80



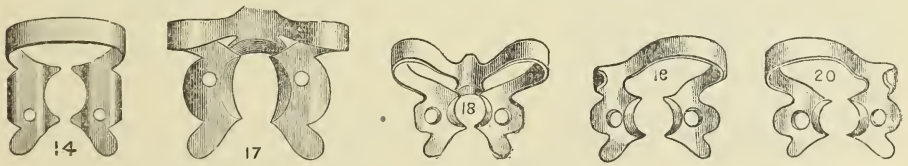
EACH.

No. 3. Designed for inferior molars, small size $0 80
" 4. (Festooned.) Designed for superior molars, small size 80
" 5. Designed for superior molars, modeled after the Tee's festoon clamp 80
" 7. Designed for inferior molars generally 80
" 8. (Festooned.) For superior molars, generally 80

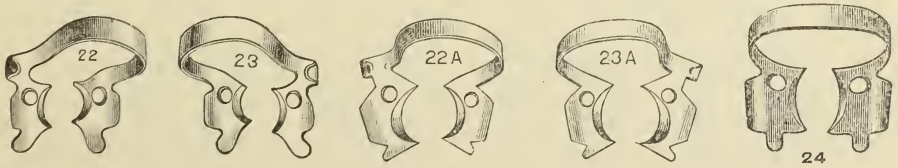


PER PAIR.

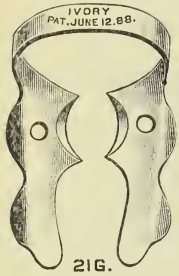
Nos. 10, 11. Are for children's molars and small teeth $1 50
" 10a, 11a. Right and left molars, patterned somewhat after the Delos Palmer set suggested by Drs. Allen and McKellops. Spread by clamp forceps that engage in holes either side of jaws 1 50
" 12, 13. Right and left inferior molar buccal cavity clamps, designed to hold the gum and rubber away from the margin of buccal cavities 1 60



No. 14. Designed for partially erupted teeth, and where a strong hold of conical crown is desirable $0 80
" 17. Designed with three jaws, to facilitate the filling of cavities on the distal surface of molars, where the adjacent tooth is absent. Spread only by forceps that engage in holes either side of jaws ... 1 00
" 18. Designed for cavities on the distal surface of bicuspids, where the adjacent teeth are out. Spread only by forceps that engage in holes either side of jaws 1 00
Nos. 19, 20. Designed for buccal cavities on bicuspids ; right and left 1 60



Nos. 22, 23. Designed for superior molars, are made with narrow jaws so as not to impinge on the gum, and yet fit these odd-shaped superior molars $1 60
" 22A, 23A. Designed for superior and inferior molars, buccal cavities 1 60
" 24. Inferior molars, small size 80



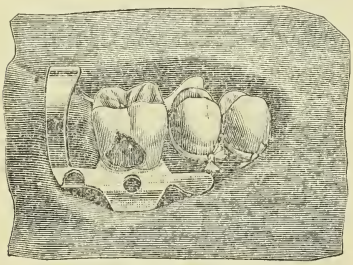
Napkin Clamp 21G.

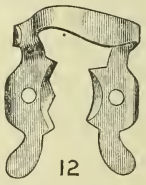
Made from a design by Dr. Gaskill, Demonstrator for a number of years at the Pennsylvania Dental College.

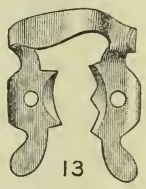
This clamp has many good features, among them the easy manner the Bow will spread.

No. 21g. Designed for all molars $1.00

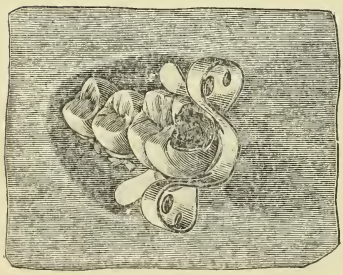
Illustrating below how cavities are exposed for ready access by some of the *specially* designed Ivory Clamps.

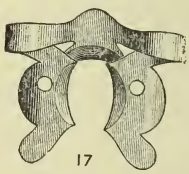






For right and left inferior molar buccal cavities.





No. 17. Designed with three jaws, to facilitate the filling of cavities on the distal surface of molars.

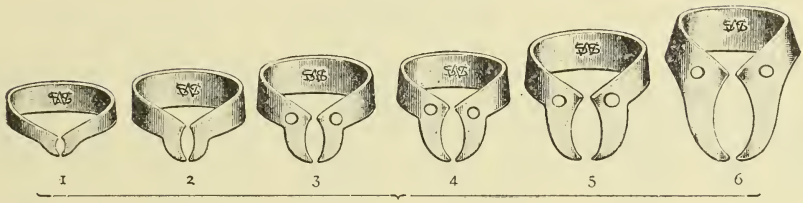
No. 18. Designed for cavities on the distal surface of biscuspids.

PRICES.

Set of Four, any three of the 80c clamps and one $1.00 Clamp.....$ 3.00
Entire Set of 32 Clamps..... 23.00
Including Morocco Case and Clamp Forceps..... 25.00

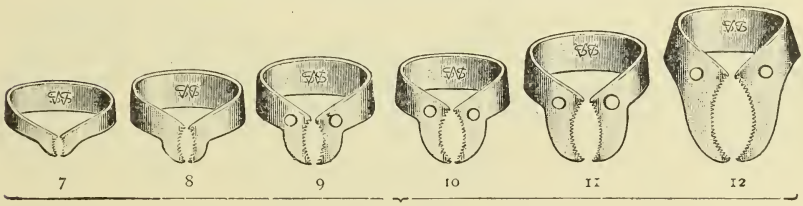
Rubber Dam Clamps.

Set of 6, Original Allan.—Plain.



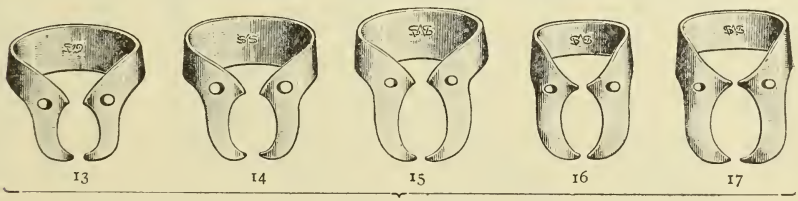
Price, each $0.40.

Set of 6, Original Allan.—Serrated.



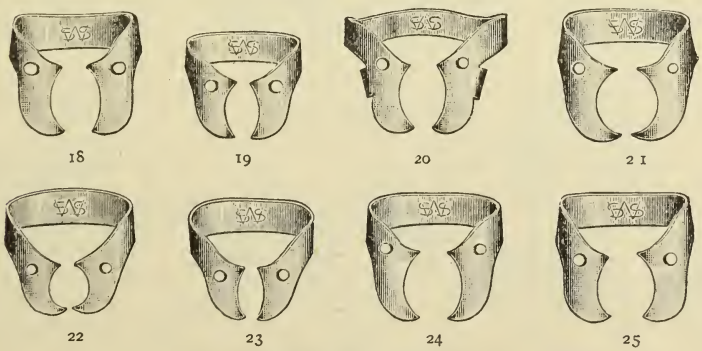
Price, each $0.40.

Dr. Charles F. Allan's Molar Clamps. **H. C.**



Price, each $0.40.

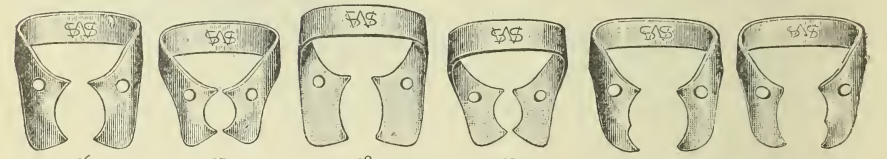
Dr. Delos Palmer's Set of 8.



Price, each $0.40.

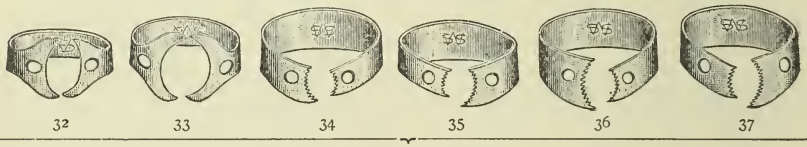
Rubber Dam Clamps.

Dr. Tees's Festooned. **Dr. Tees's Broad Flange.** **Dr. W. W. Evans's Beaked Molar.**



Price, each $0.40.

Dr. Huey's. **Small Irregularity.** **Irregularity.**

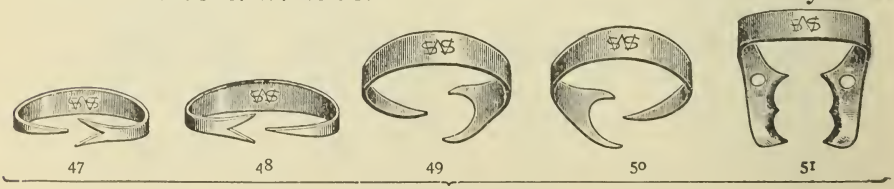


Price, each $0.40

Set of 9, Reach-Around.

Price, each $0.40.

Dr. Jno. W. Holt's. **Dr. J. W. Lyder's.**



Price, each $0.40.

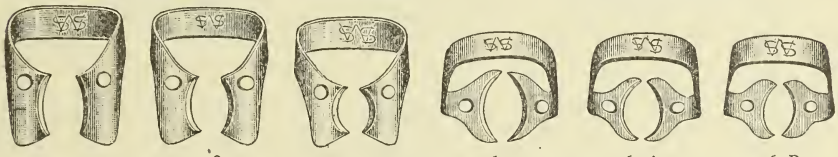
Rubber Dam Clamps.

Dr. H. C. Longnecker's.

52 53. 54 55 56

Price, each $0.40.

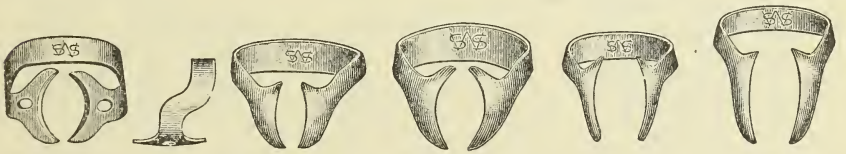
Dr. H. C. Longnecker's "Back Set." **Dr. Southwick's.**



57 58 59 60 60 A 60 B

Price, each $0.40.

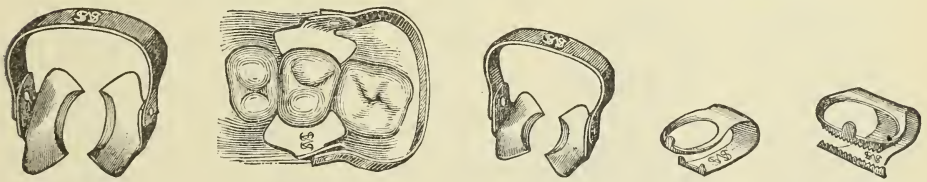
Dr. Southwick's. **Dr. E. C. Moore's.**



60 C 61 62 63 64

Price, each $0.40. Price, each $0.60.

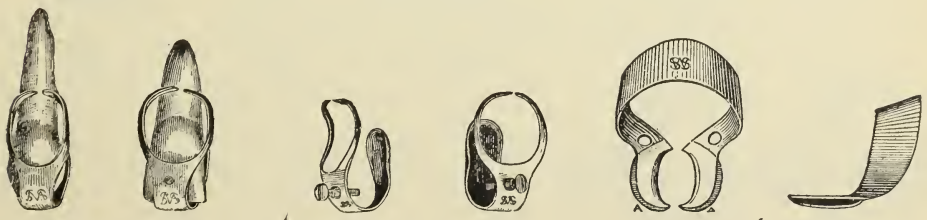
Dr. W. E. Buckman's. **Dr. J. F. P. Hodson's.**



67 68 69 70 71

Price, each $0.80.

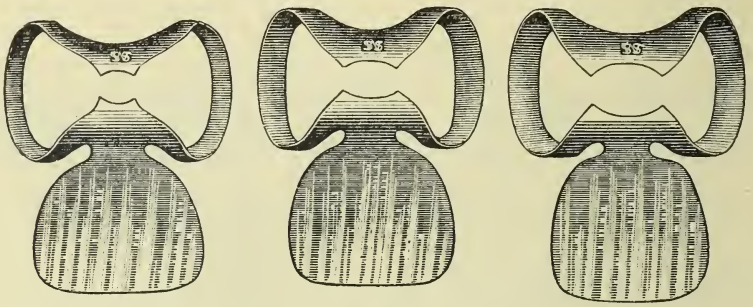
Dr. W W. Evans's "Incisor and Bicuspid." **Dr. W. W. Evans's "Incisor and Bicuspid" with Set Screw.** **Dr. Hickman's.**



72 73 74 75 76

Price, each $0.80. Price, each $1.00. Price, each $0.90.

Rubber Dam Clamps.—Continued.



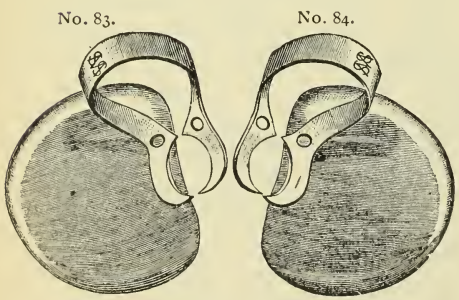
77 78 79

Price.....$1.25 each.

Dr. L. Ynchausti's.

80 81 87

Price.....$2.00 each



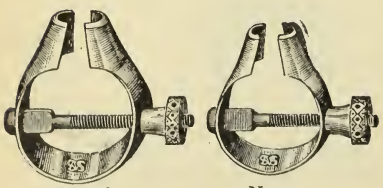
No. 83. No. 84.

Rubber Dam Clamp with Tongue Guard.

Especially adapted for crown cavities, and for under approximal or buccal cavities which do not extend to the cervical margin. With this Clamp alone a tooth may often be kept dry for over an hour.

Price, each $1.00

New Root-Clamps for Crown Work.



No. 118. No. 119.

Adjusters for the application of the dam to roots upon which porcelain crowns are to be fitted. The dam is adjusted over the adjoining teeth, carried beyond the cone-shaped ends of the Clamp with a waxed silk ligature, the Clamp is removed, leaving the dam in position.

Price, each $2.00

Rubber-Dam Clamps.—Continued.

Dr. Delos Palmer's Set of 32.

60 cents each.

To make selection easy and provide a neat way of keeping the Palmer set of clamps, we make a handsome Case. Each Clamp has its appropriate little wooden peg, labeled and numbered to correspond with the numbers on the Clamps and there is a place also for the Forceps. The pegs are made of appropriate sizes for the Clamps they are to hold.

The Case is leather-covered, lined with satin and velvet. We also supply a plain pasteboard box, with the same arrangement for holding the Clamps.

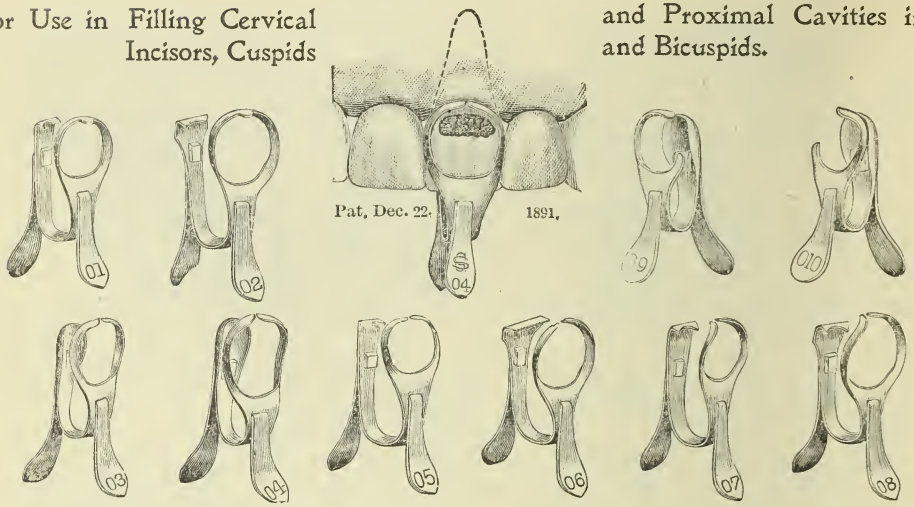
Morocco Case, lined with satin and velvet.....$ 5.00
The same, with set of Thirty-two Clamps and Palmer's nickel-plated Forceps..... 26.50
Pasteboard Box, containing the same arrangement for the Clamps..... 2.50
The same, with set of Thirty-two Clamps and Palmer's nickel-plated Forceps..... 24.00

Substituting the Universal Clamp Forceps for the Palmer, add 50 cents to the price of complete set. For description, see page 299.

Meister's Improved Lever Clamps

Gideon Sibley, Sole Agent.

For Use in Filling Cervical and Proximal Cavities in Incisors, Cuspids and Bicuspids.

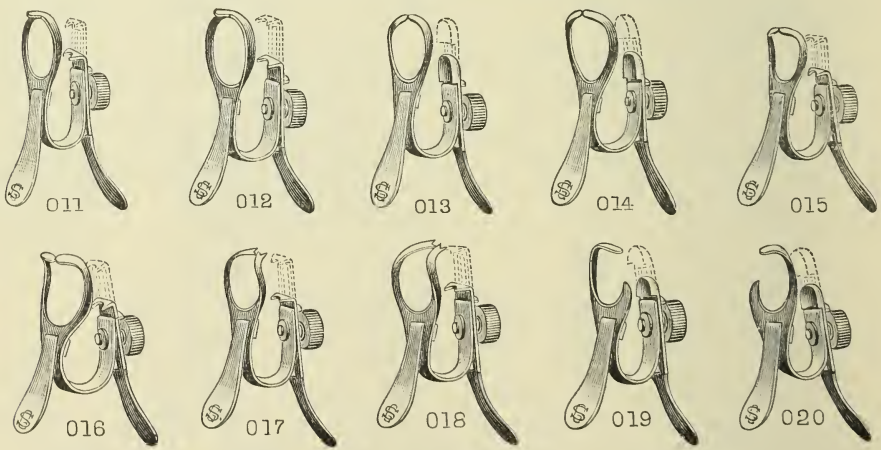


The Meister modifications and improvements, including the Lever Attachments, render these Clamps the most easily and quickly adjusted and removed, with the least discomfort to patient. A pressure on the levers by thumb and finger opens the Clamp, and when released, it closes with sufficient tension to firmly hold in position.

Nos. 01, 02, 03, 04, 07 and 08 are designed for use in filling all labial surfaces of incisors, cuspids and biscuspids where the cavity is close to or under the gums; 07 and 08 being especially effective in the more troublesome and difficult cases. No. 05 is for lower incisors or very small teeth. No. 06 is adapted for more general use on all front teeth. Nos. 09 and 010 are rights and lefts designed for proximal cavities. For general use on biscuspids, 02, 04 and 08 are best adapted, but in some cases other numbers can be used to advantage.

Price, each $1.00
Set No. 1, complete..... 8.50

Meister's Improved Adjustable Lever Clamps.

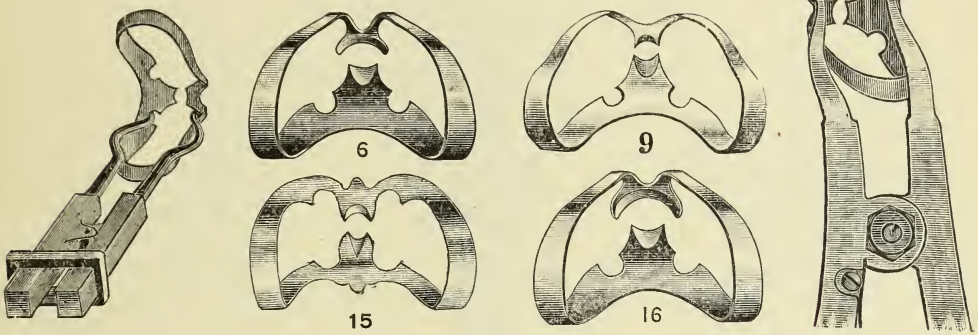


The above No. 2 set of Clamps are the same forms as those comprising set No. 1, but have an adjustable instead of the fixed palatine attachment. They are thus regulated at will, and are adjustable to all cases; the advantage of which will be at once apparent to the practical operator. Order from your dealer or direct.

Price, each $1.75

Ivory's Labial Clamps.

Nos. 6, 9, 15, 16. Patented April 2d, 1889.



These four clamps constitute a complete set of Ivory's Labial Clamps, which are applied by a forcep. There are very few marginal cavities that these clamps will not expose; No. 9 being most universal; No. 6 for Superior Centrals and Cuspids; No. 15 for Inferior Incisors, and No. 16 for cavities extending wide on the face of the tooth.

Manner of Application.

In adjusting these clamps to a tooth, carry the Lingual Jaw to a point beyond the bulb of the enamel at the margin of the gum, holding it there while the clamp is tilted outwardly till the Labial Jaw catches the tooth beyond the margin of decay; thus it will be noticed that the Lingual Jaw acts like a pivot as it bears against the inner side of the neck of the tooth, while the outer jaw is being tilted forward on the tooth. After the clamp is in place it can often be forced still higher by pressing with an instrument against the Labial Jaw; some doctors take a burnisher and get under the jaw and cant it back, as any pressure here not only pushes the clamp higher on the neck of the tooth, but tends to strengthen or tighten the hold of the clamp to the same.

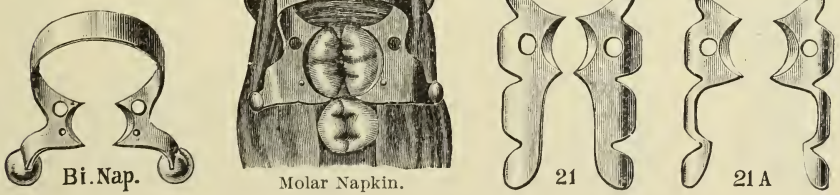
Copied from "Items of Interest," February, 1890.

"The new 'Cervix Clamps,' as devised by Dr. Ivory, are excellent. I have tried the 'Stoner,' 'Long,' and other Cervix Clamps, none of which have proved so generally useful as those of Dr. Ivory. These Clamps as made are easily adjusted to the tooth, remain firmly fixed, holding the dam out of the way, and make easy an operation.

Price, $1.00 each. Per set of four, $3.50.

Bibulous Paper and Napkin Clamps.

Patented, June 12, 1888.

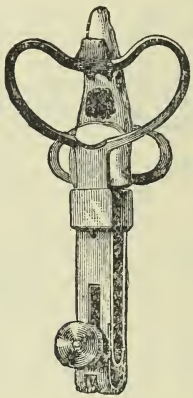


Napkin clamps for molars and bicuspids, superiors and inferiors. Designed for holding bibulous paper and cotton rolls.....$1.00

Nos. 21, 21a. Is designed to carry the rubber, and to fill a simple crown cavity. The projecting arms to hold the rubber down, so as to do away with the necessity of attaching rubber to more than the one tooth; and is also designed to hold cotton or napkin for plastic fillings and treatment of roots, etc..... 1.00

Ivory's Adjustable Clamp.

Patented January 23, 1894.



A Wonderful Success
Just What is Wanted
Surpassing
All Other Attempts.

None Equal to it
For Cavities Deep on
the Neck of the
Tooth.

This Clamp is tightened to a tooth by means of a slide—see drawing.

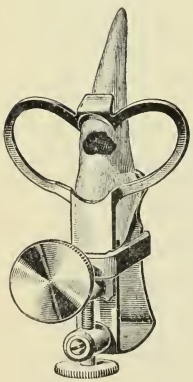
It is simple, out of the way and easy to work; a comfort in comparison with others, holds firm and goes deep.

The construction is so simple that explanation is unnecessary. It may be adjusted to go higher on the tooth without removing, simply by loosening the set screw and sliding the arm attached to the Labial Jaw farther through the slide, then tightening the screw again.

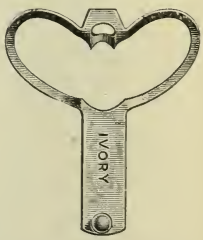
Should the slide fastener have a tendency to slip on very large teeth, pin holes are made in the arm to hold it at any place desired.

Warranted to give satisfaction.

Price $1.50



Ivory's Improved Adjustable Clamp.



Patent Applied For.

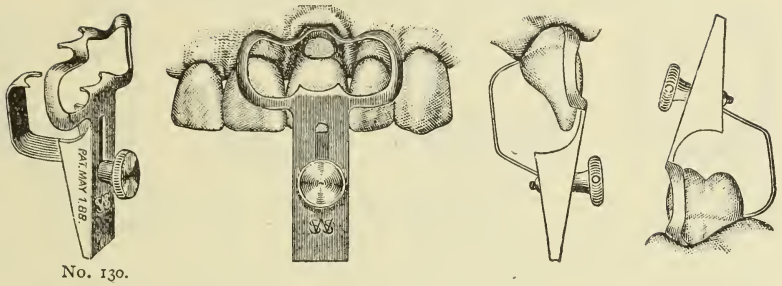
The great advantage of this Clamp, where it surpasses all others, is that the labial jaw is forced by screw pressure, carrying the rubber dam and gum in advance of the jaw, thus exposing the cavity and keeping it dry for the operation.

INSTRUCTIONS.

First place on the tooth the rubber dam "ligature" with a proper instrument, press the ligature well up on the palatal neck. Then apply the clamp, taking care that the palatal jaw catches above the margin of the enamel beyond the bulb of the tooth. Tighten the yoke screw, having both the labial and palatal jaws below the ligature. After the clamp is thus adjusted cut ligature, turn the pivotal screw to the left, forcing the labial jaw to sufficient distance above the cavity. As this jaw advances to the lesser diameter of the neck, continue tightening the yoke screw so that neither the gum or the rubber dam can slip under the jaw of the clamp. Remove by loosening the yoke screw when the natural spring of the clamp releases the jaws from the tooth.

Price of Clamp $2.50
Extra (Small Labial) Jaw Attachment ..... .50

Dr. How's Cervix Screw Clamp.

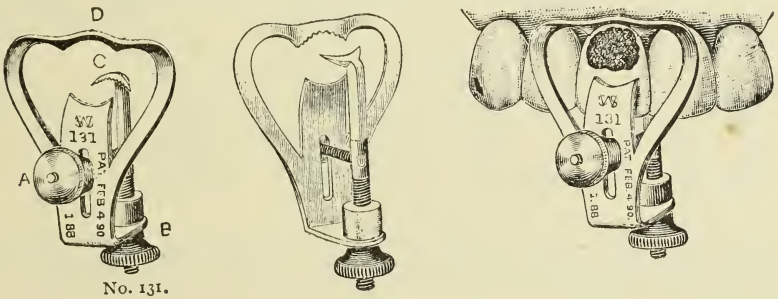


No. 130.

The illustrations show the Clamp in position on an upper central and a lower bicuspid, the cavity in each extending far beyond the normal gum margin.

Price, each $2.25

The Johnson Cervix Clamp.

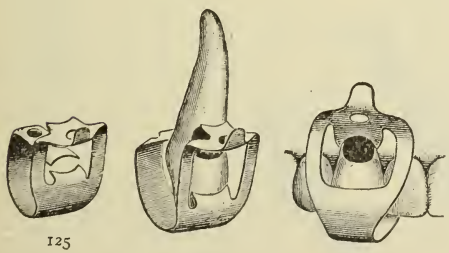


No. 131.

By means of the nuts A and B this Clamp may be adjusted to and firmly fixed on any tooth anterior to the molars.

Price, with wrench $2.50

How's Cervix Clamp.



125

The use of the Cervix Clamp in holding back the gum from a cavity in the tooth-neck is made obvious by the illustration.

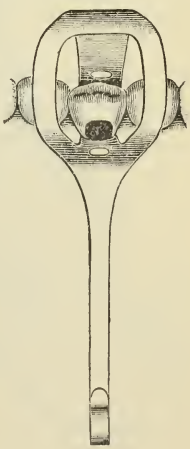
Price, each $1.00

Johnson's Lever Clamps.

For use in filling cavities which extend under the gum margins of incisors, cuspids and bicuspids.

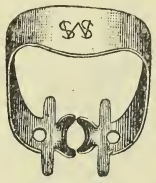
The Clamp is easily adjusted and the gum is not disturbed except at the point where the work is to be performed, where the clamp acts as a protector.

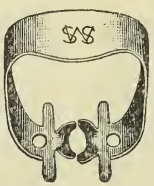
Price, each, $1.00

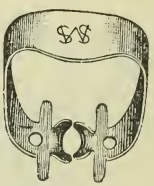


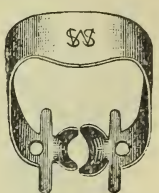
124

Ottolengui's Root Clamps for Crown Work.


No. 126.


No. 127.


No. 128.


No. 129.

The set consists of two pairs. The rubber-dam is first stretched over the Clamp lugs, thus permitting a view of the root, and then pushed well under the gum.

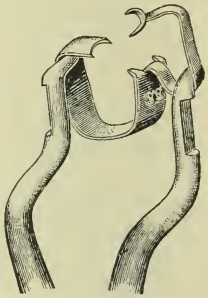
Price, each $1.50

Climax Cervix Clamps.

132

134

136



133

135

137

In use, the Clamp is first placed on the tooth, which it grips with remarkable firmness, and the rubber-dam, punched through the largest hole of the Ainsworth punch, is then stretched over it. There is no risk of dislodging the Clamp. The set of six will be requisite in a practice of considerable extent, though the first four numbers will meet many presentations satisfactorily.

Price, Climax Cervix Clamps, each..... $0.75

Dr. W. H. Duddy's Napkin Holder and Clamp.

FIG. 1.

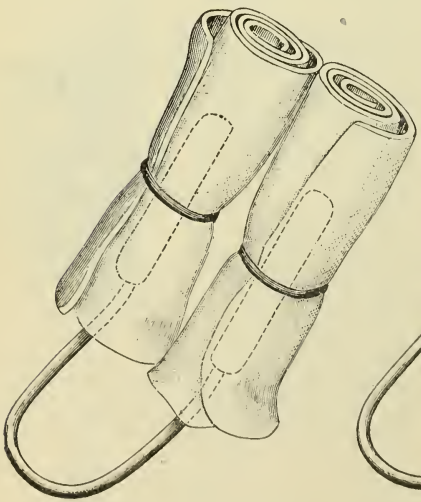
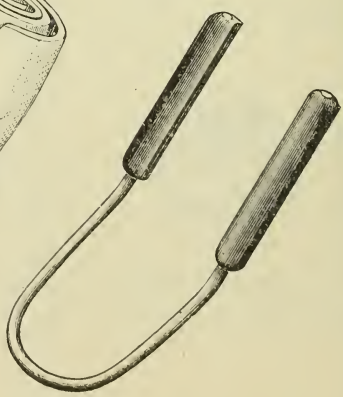


FIG. 2.



This appliance is made especially for carrying napkins made of Cottonoid, and is designed principally for use on the posterior portion of the inferior maxilla while inserting temporary fillings, or treating teeth; although it can be used advantageously on the superior maxilla also. The wire should rest on the gum back of the last molar tooth, and the napkin should be forced well down on the lingual surface of the maxilla in order to compress numerous sublingual ducts and prevent the free flow of saliva.

Fig. 1 shows the holder with the napkin ready for use. Fig. 2 is the holder, made of nickel-plated steel wire, with the ends covered with hard rubber. These illustrations are full size.

The Cottonoid Napkins as shown in the cut are 3½ inches long and 2 inches wide.

The napkins can be rolled any size on an excavator handle, and then easily slipped over the ends of the holder.

Price $0.40

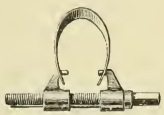
The Ladmore-Brunton Clamps and Matrices.

With Flexible Key.

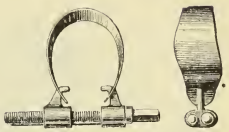
Made by C. Ash & Sons, Ltd.

1.

2.



3.



4.

Fig. 1. Key for adjusting, with steel spiral spring between the upper end and the handle. The Spring admits of the Key being turned when the handle is at right angles to it almost as easily as when it is straight.

Fig. 2. Clamp with sliding bar parallel with the Screw. As will be seen from the illustration, it forms a miniature parallel vise, the hooks representing the jaws of the vise.

In Figs 3 and 4 a Clamp is shown in which the sliding bar is placed at right angles to the hooks. This was introduced with the idea of making the clamp lie closer to the tooth, and it is difficult to say which is the better of the two, as they both have points to recommend them.

Either is equally efficient with molar or bicuspid teeth, and each has been used for both gold and amalgam fillings with satisfactory results. The sections on the right hand side of Fig. 2 and Fig. 4 give a clear idea of the position of the sliding bar in the two forms.

Fig. 3. Shows a Matrix for bicuspids attached to the Clamp.

Fig. 4. Shows a Matrix for molars attached to the Clamp. The depth of this Matrix is given in the section.

Directions for use sent with each set.

PRICES.

One Clamp, either style, nine Matrices and one flexible Key for adjusting, complete ..... each $3.00

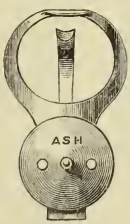
Separately { Clamps, either style ..... each 1.75
Matrices, any size ..... per dozen 1.25

The Ideal Clamp.

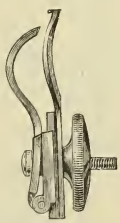
For Labial Surface Cavities on the Sixteen Anterior Teeth.

(Dr. J. L. Williams'.)

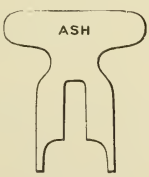
Made by C. Ash & Sons, Ltd.



Front View.



Side View.



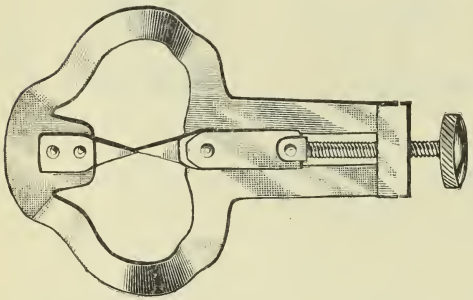
Spanner.

The Clamp here illustrated was made for Dr. J. L. Williams several years ago, from pattern furnished by him. The special features of the Clamp are the combination hinge and sliding joint, by means of which the outer side of the Clamp may be easily adjusted to any degree of gum recession, the milled head set-screw with which it may instantly be fixed in the required position, and the general form which combines adaptability, delicacy and strength.

Price, with Spanner for tightening up and for releasing the Clamp $2.75
Spanner separately ..... .25

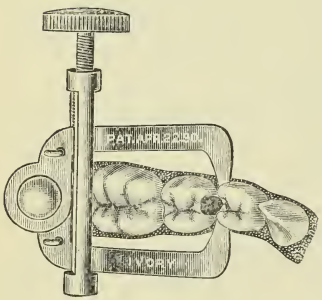
Ivory's Universal Double Bow Separator.

Patented September 16, 1890.



The above Separator is so easily adapted to the teeth, front or back, that it has at once become popular. The force of the screw being applied direct, it will turn with the thumb and finger with very little effort. The beveled sides of the wedges facing the gum prevent (when the wedges catch the teeth) any slipping of the instrument, avoiding unnecessary pressure on the gum, yet holding the gum and rubber well away from the margin of the cavity.

Price, each $3.50



Dr. Elliot's Separator.

Not only for getting space for filling teeth is this Separator useful, but for examinations, cleaning, separating after filling for strips, disks, etc. It is universal in its application, is easily adjusted, and is out of the way more than any other Separating Instrument in the market. Screw operates in either end of yoke.

Instructions.

The lettered side of the Separator faces the operator. A spring opens the jaws as the screw is slackened. The jaws are arranged to pass one another, and beveled to prevent any tipping of the instrument forward. The rubber is held out of the way by the extending blades.

"Your Elliot Separator is certainly the most useful little instrument ever invented for the busy dentist, as well as a humane and time-saving appliance. Where I formerly separated teeth gradually with cotton and rubber, taking several days and keeping patient in misery, and often setting up severe inflammation and endangering the life of the pulp, sometimes resulting in the loss of the tooth, I now, with the Elliot Separator, fill all classes of cavities in nearly all teeth immediately, and have yet the first case come to notice where there was subsequent inflammation caused by separating, in over two years since I began the use of your Separator."

C. D. MILES, Troy, Ohio.

Price $2.50

Perry's Two Bar Separators.

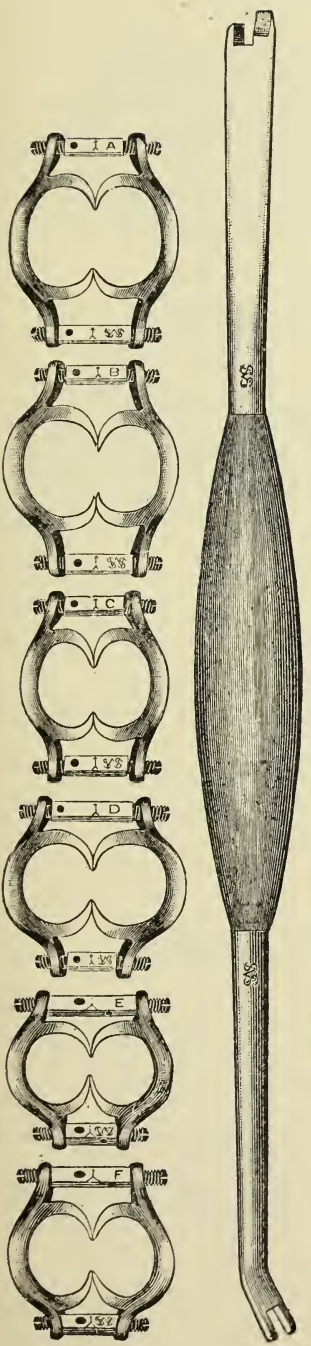


FIG. 1. FIG. 2.

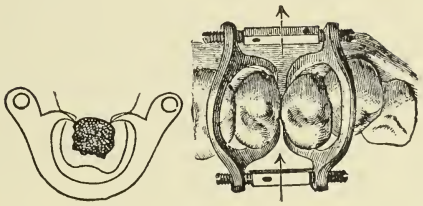


Fig. 1 shows the Separator applied. When there is a tendency, as with teeth of narrow necks, to slip toward the gum, wood or gutta-percha props are to be put on the adjacent teeth under the bows to prevent them from tilting and to keep the points from being forced under the gums while the teeth are being separated.

Fig. 2 shows the position of the bars--out of the way of the operator.

PRICES.

Two Bar Separators	each	$ 3.50
Wrench for same	each	1.25
Small Wrench for same	each	.50
Set of 6 in case		24.00
Case, separately		2.00

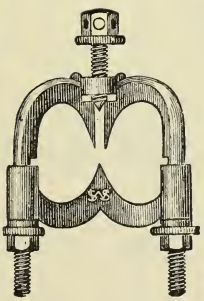
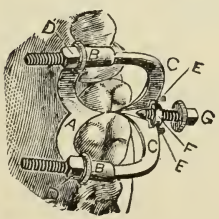


FIG. 1.



Parr's Universal Separator.

This Separator is universal in application and adjustment between the teeth of all denominations in either jaw; it is therefore manufactured in a single form of the exact size of the cut.

Will render practical service in every part of the mouth where two teeth are to be forced and held apart from any dental operation.

PRICES.

Universal Separator, with Wrench	$7.50
Wrench, separately	.25

The General Separator.

Instead of illustrating this Separator separately we show it in practical use.

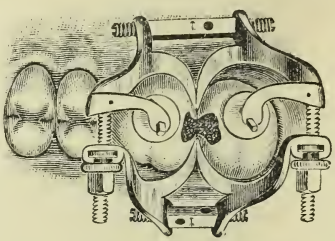
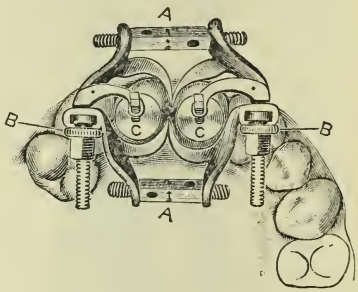


Fig. 3.

It is an improvement by Dr. How upon the well-known two-bar separator of Dr. Perry. The General Separator supplements the peculiar Perry Separator function (which affords unobstructed access to both approximal surfaces throughout their entire length) by providing crosswise adjustments ranging from the lateral to the molar interdental dimensions.

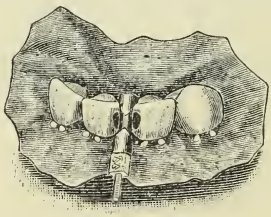
This adjustability is of great advantage in fitting the beak-bearings to the teeth-necks to effect safe separating pressure when the cavity walls are thin.

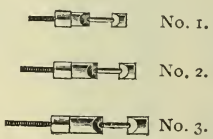


PRICES:

General Separator		each	$7.00
"	" Wrench	"	.50
"	" Flexible wrench	"	.70
"	" Complete	"	8.00

Little Giant Separator.





This device is especially useful for the immediate separation of teeth having small approximal cavities. A glance at the illustrative example will show that it is not at all in the way of the operator, while well disclosing the cavities.

The No. 1 size is for use between upper or lower incisors, as shown.

Nos. 2 or 3 may often be used as a matrix-holder and separator between bicuspids or molars.

In matrix operations the separator may often be applied without removing wedge or nut.

PRICES:

Set complete		$3.75
Separately—No. 1, No. 2 or No. 3	each	1.15
Wrench	"	.40

Fixed Blade Separator.

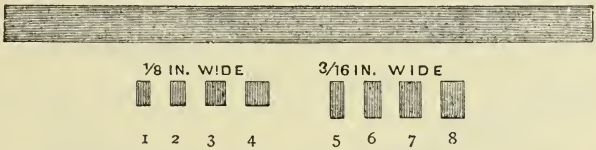
For immediately separating teeth, whether for operations or for thorough examination. It is manipulated by forcing the thin portion of the blade between the teeth to be separated, then pulling outward slowly and firmly with a little swaying motion, until the proper space is obtained. Price, nickel-plated, 75 cents.

Improved Orange-Wood Wedges.

A convenience to the operator because they are nicely, smoothly sharpened, won't sliver or splinter or break, and won't tear the rubber-dam. They are a comfort to the patient, because his gums are not lacerated. Then the price at which they are sold—so low that the dentist cannot afford to whittle out his wedges as long as he can buy these. Equally useful in separating and regulating.

Put up in boxes containing one gross each, assorted shapes and sizes. Price, per box, 15 cents.

Rubber Strips for Separating Teeth.



These Strips are largely used, and are much preferred to any other forms.

Made in two widths and of four thicknesses. Nos. 1, 2, 3, 4 are 1/8 inch wide; Nos. 5, 6, 7, 8, are 3-16 inch wide. Length of Strips, 3 inches.

Boxes containing 50 Strips, assorted sizes, or any designated numbers.

Price .....per box $ .25

Pure Rubber for Separating Teeth.

Price, per ounce .....$ .30

Boxwood Wedge Slips.

Dr. Palmer's large, 6x3/8x1/8, each.....$ .05
Dr. Palmer's medium, 6x3-16x1/8, each..... .02
Dr. Palmer's small, 6x1/8, square, each..... .02

Cottonwood Wedge Slips.

Two sizes, 8¼x¼x¼ inch, and 8¼x3/8x3-16 inch, known as Dr. Butler's.
Price, either size, per doz.....$ .20

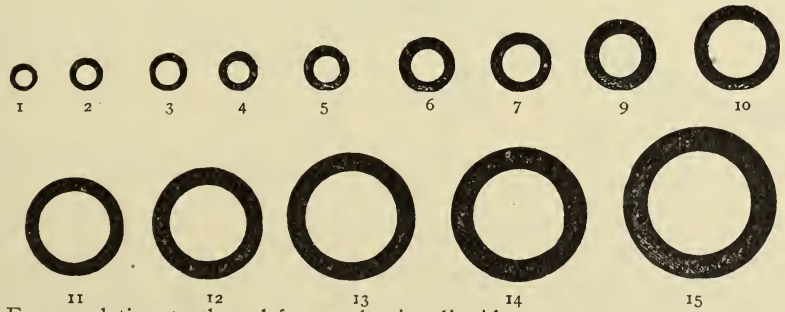
Orange-Wood for Wedging.

Superior Quality.

Price, per bundle.....$ .10

French Rubber Tubing.

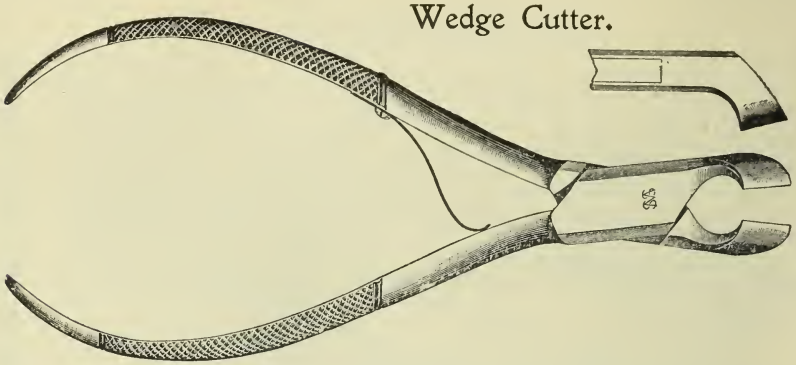
Our Own Importation.



For regulating teeth and for conducting liquids or gases.

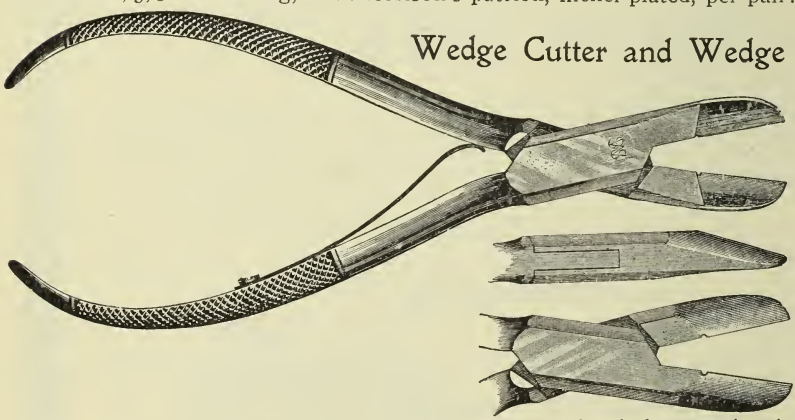
Nos. 1 to 7.....per foot 15 cents.
Nos. 9 to 11.....per foot 25 cents.
Nos. 12 to 14.....per foot 40 cents.
No. 15 .....per foot 60 cents.

Wedge Cutter.



No. 1, 6 inches long, as shown in cut, nickel-plated, per pair.....$3.00
No. 1, 5 inches long, nickel-plated, per pair..... 3.00
No. 2, 5½ inches long, Dr. Morrison's pattern, nickel-plated, per pair..... 3.00

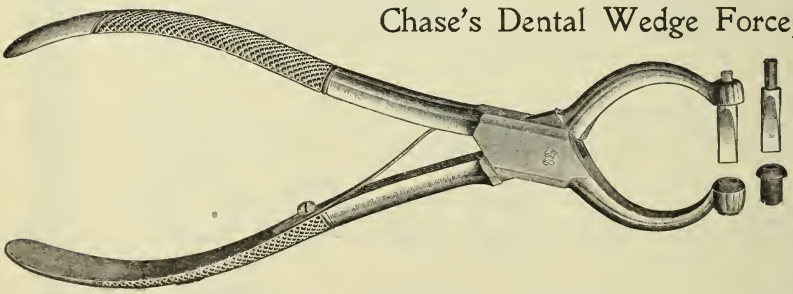
Wedge Cutter and Wedge Compressor.



Design of Dr. Chas. Miller.

These are used to compress the wedge before cutting it.
Price, nickel-plated, per pair.....$3.00 Cheaper grade $2.25

Chase's Dental Wedge Forceps.



For Separating the natural teeth to facilitate cleaning, excavating, filling, polishing, etc.

By the use of the Wedge Forceps teeth can be readily forced apart with much less pain to the patient and considerably less trouble to the operator than by any other method.

The cushion forms an elastic bearing, thus preventing the inward pressure while the wedge is being forced between the teeth.

The wooden wedges or points which are furnished with the Forceps can be shaped in a few seconds for any space desired.

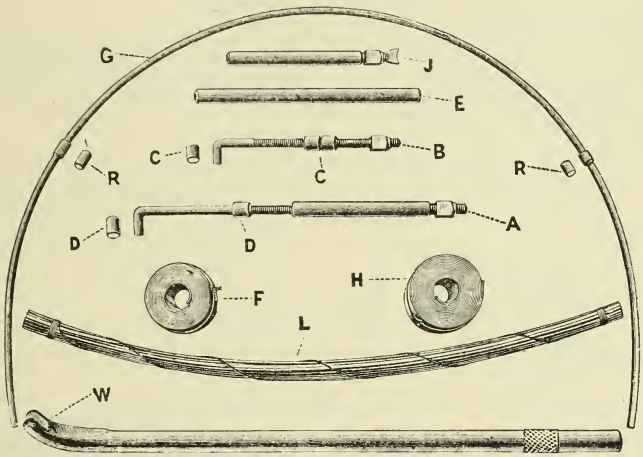
With each pair, and included in the price, we supply two dozen wedges, assorted lengths, made of boxwood and orangewood, and two rubber pads.

Price, complete $3.00
Rubber Pads .....each .10
Wedges .....per doz. .25

Angle's Regulating Appliances.

Set No. 1.

Patented March 5, 1889.



PRICES.

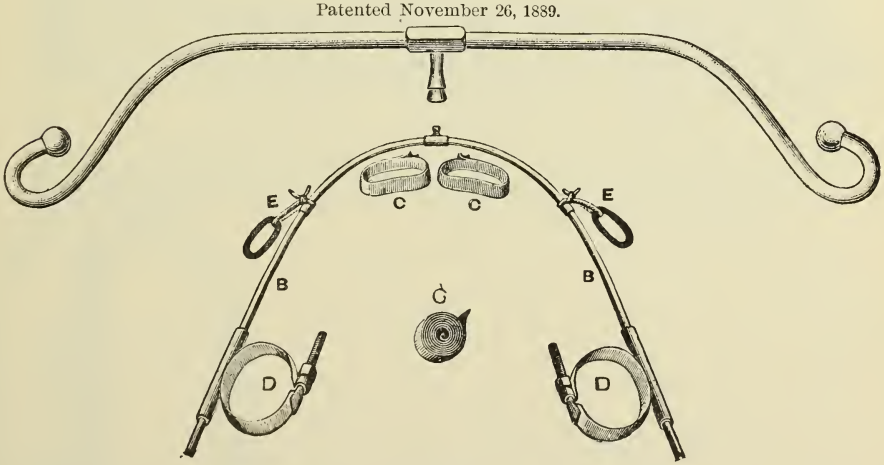
Set No. 1, complete (including 100 page descriptive book) $5.00

PARTS SEPARATELY.

Traction Screw "A" and "D"		$1.25
Traction Screw "B" and "C"		1.00
Jack-Screw "E" and "J"		1.00
Coils of Band Material "F" and "H"	each	.50
Retaining Wire "G"		.50
Rotating Levers "L"	per ½ doz	.25
Retaining Pipes "R"	set of 10	.75
Wrench	each	.15

Set No. 2.

Patented November 26, 1889.



PRICES.

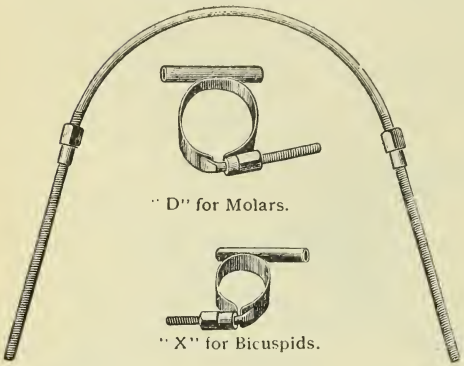
Set No. 2, complete (including 100 page descriptive book) $6.50

PARTS SEPARATELY.

Traction Bar "A"	each	$2.00
Wire Arch "B"	"	1.50
Anchor Bands and Pipes "D," complete	"	1.50
Coils of Band Material	"	.50
Heavy Elastic Bands	set of six	.10
Wrench	each	.15

Angle's Regulating Appliances.—Continued.

Expansion Arch.



Expansion Arch, alone....$1.50
Anchor Band "D"..... 1.50
" " "X"..... 1.50

Annealed Wire.

For Ligatures in Regulating.

Dr. Angle remarks that spring wire will not do. We offer Annealed Wire, in Copper and Brass, and of the gauges he prescribes (Nos. 26 and 28, B & S.)

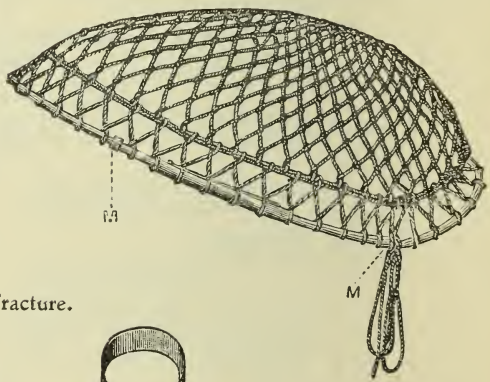
Put up in $\frac{1}{4}$-lb. Spools.

PRICE.

Per Spool $0.25

Head Gear.

Head Cap, with Heavy Elastic Bands, each $4.00
Chin Retractor, without head-gear 2.50
Band Driver ..... .20



Bands.

Adjustable. Fracture.

Price.....each $1.00

Price.....each $1.10

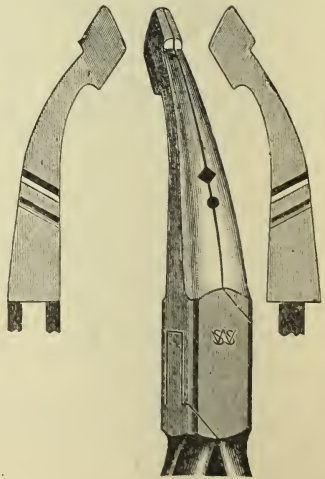
Angle's Band-Forming Pliers.

The Band-Forming Pliers are made especially for pinching or forming the plain bands about the crowns of teeth in regulating, and about roots in crowning.

The angle of the beaks and plurality of operating edges make them equally adapted to forming the seam upon the lingual or labial surfaces of the teeth in either jaw without requiring a cramped position of the hand.

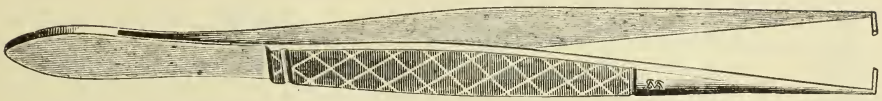
Between the beaks are square and round grooves for holding wire, nuts, etc.

Price $2.50



Angle's Regulating Appliances.—Continued.

Angle's Band Soldering Pliers.



These Pliers are for holding bands when soldering.
The pressure is brought to bear evenly and at the exact point required, and away from contact with the solder while in the flame. The angle of the beaks permits the least absorption of heat, and without injury or change of form.

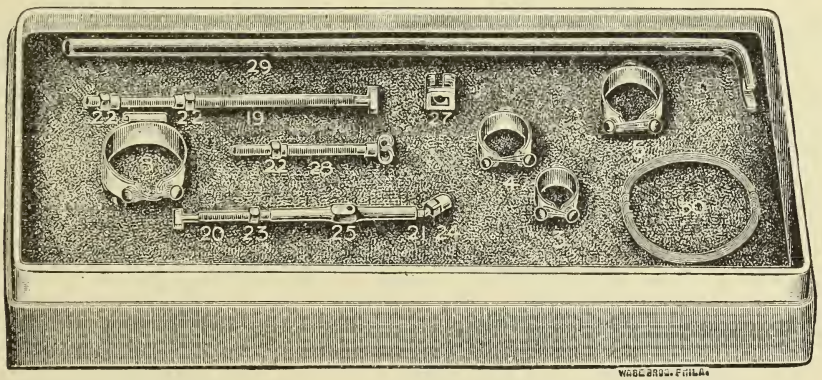
Price.....$0.70

Angle's Wire Stretching Pliers.

These Pliers are found especially useful in regulating the teeth. The peculiar form renders them easy of application in any part of the mouth. A little experience will render the operator skillful, and he will probably be surprised to see how much can be accomplished with them. They should not be used on hard or large wire.

Price.....$3.75

Knapp's Method of Teeth Regulation.



The selection here represented will suffice for immediate use in many cases.
Price, including book.....$8.00

List and Prices of Parts.

Nos. 1, 2, 3, 4, 5, 6.	Studded Band	each $0.50	No. 33.	Straight-neck Ball Bar	each $0.50
" 7, 8, 9, 10.	Double Socket Clutch Bands	" .75	" 34.	Bar-end Cap	" .25
" 11, 12, 13, 14.	Single " " "	" .60	" 35.	Arch-bar, right threaded	" 1.00
" 15, 16, 17, 18.	Bite Bands	" .50	" 36.	Perforated Stud	" .25
" 19.	Long T Bar	" .50	" 37.	Retaining Clamp	" .50
" 20.	Short T Bar	" .45	" 38.	" " Nut	" .25
" 21.	Ball Bar	" .50	" 39.	" and Connecting Band	" .25
" 22.	Clutch Nut	" .25	" 40.	Left hand threaded T Bar	" .50
" 23.	Lock Nut	" .20	" 53.	Stud Bar, right threads	" .50
" 24.	Ball Cap	" .75	" 54.	" " Nut	" .75
" 25.	Long right and left threaded Nut	" .75	" 55.	Bar Hook	" .25
" 26.	Short " " " "	" .60	" 56.	" " Spring	" 25
" 27.	Square T Socket	" .75	" 57.	Straight Ball Bar, right threads	" 50
" 28.	Round T Socket Clutch Bar with Clutch Nut	" 1.00	" 58.	Protrusion Bar	" 2.50
			Studded Screw Bands		" 1.00
" 29.	Wrench	" .15	Single Socket Screw Bands		" 1.00
" 30.	Band Wire	" .25	Double " " "		" 1.00
" 31.	Single Auxiliary T Socket	" .75	Retaining Band Punch No. 12		" 2.75
" 32.	Double " " "	" 1.00			

The descriptive book containing many illustrations of typical cases in practice, is sold separately. Price $0.50

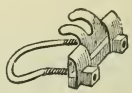
Yoke Regulator.

Key.

Molar Bow, A.

Molar Coupler.

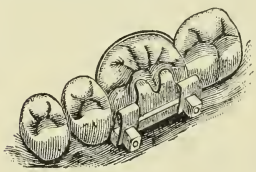
Molar Yoke.



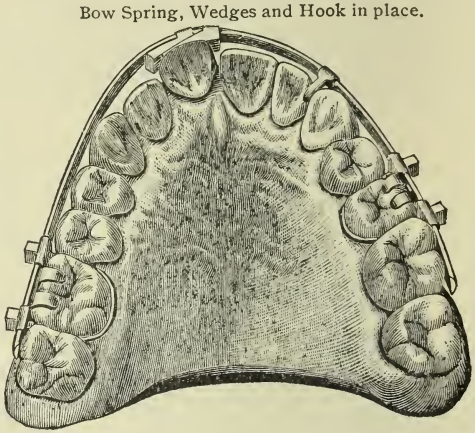
Bicuspid Bow, B.

Bicuspid Coupler.

Molar Yoke in place as an anchorage for a spring or rubber ring or ligature.



Molar and Bicuspid Yoke Regulators with Patrick's Bow Spring, Wedges and Hook in place.



PRICES.

The Set, consisting of two each 18-carat Molar and Bicuspid Yokes, and one Key.. .....$12.65

These Yokes are adaptable to the Patrick Bow-Spring, the price of which with two Wedges and one H Hook adds..... $4.70

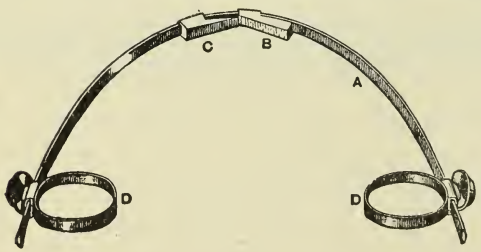
PARTS SEPARATELY.

Molar Coupler, 18-carat Gold	each	$2.00		Two Nuts 18-carat Gold	each	.25	$0 50
" Bow, A, " "	"	.75		Making a complete Bicuspid Yoke	"		2.9›
Two Nuts, 18-carat Gold	"	.25	.50	Bow Spring, 18-carat	"		3.00
Making a complete Molar Yoke	"		3.25	Wedges (Patrick's), 18-carat Gold	"		.60
Bicuspid Coupler, 18-carat Gold	"		1.75	Hooks H " " "	"		.50
" Bow, B, " "	"		.70	Key, Nickel-plated	"		.25

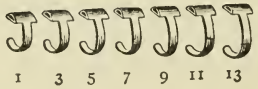
For prices of Patrick Bow-Spring, etc., see below. The cost of the Yoke Regulators and Patrick Bow-Spring, etc., as shown in cut of cast, and including a Key, is $11.15.

Teeth Regulators.

Invention of Dr. John J. R. Patrick. Patented March 20, 1883.



H



K

L

All the parts, including the spring, are made 18-k. gold. Complete set, as above, but with 12 slides, K, in all thirty-one pieces $18.25

SEPARATELY.

A. Bow-Spring	each	$3.00		H. Hooks (7)	each	$0.50	
B. Wedge	"	.60		K. Slides (12)	"	.20	
C. "	"	.60		L. Cuspid Hook	"	.75	
D. Anchor Bands (2)	"	2.50		Molar Anchor Bands	"	2.75	
E. T-Bars (6)	"	.40					

B. D. M. Co's. Jack-Screws.

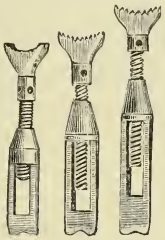
Southwick's Pattern of Jack Screws.

Especially designed for use against bicuspids for expanding the arch. One tooth is moved at a time; the plate being notched for the reception of the revolving head of the Jack Screw, which bears directly upon the tooth. New rubber is vulcanized in the notch to retain the tooth in position.

Three sizes are made, the same in length as the above. They are also RUST PROOF.

PRICE.

Southwick's Jack-Screws .. ..each $1.00



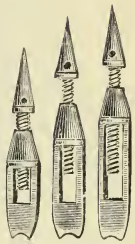
No. 1 No. 2 No. 3

Old Style Jack Screws.

These are of the ordinary shape and in three sizes as follows: 7/8 in. opening to 1 1/8 in., 1 in. opening to 1 3/8 in., 1 1/8 in. opening to 1 1/2 in. By a new process we have recently adopted, these Jack Screws are perfectly PROTECTED FROM RUSTING. They are always ready, and after long-continued use will be found to turn as easily as at first.

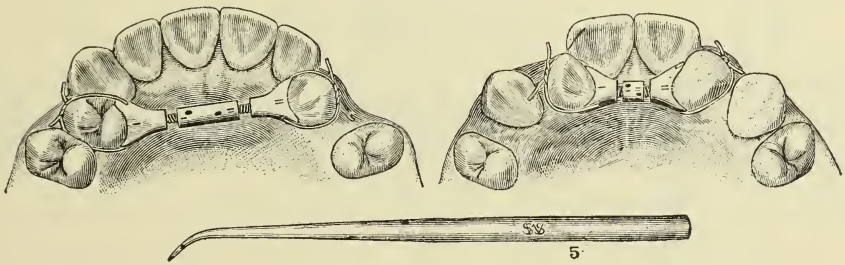
PRICE.

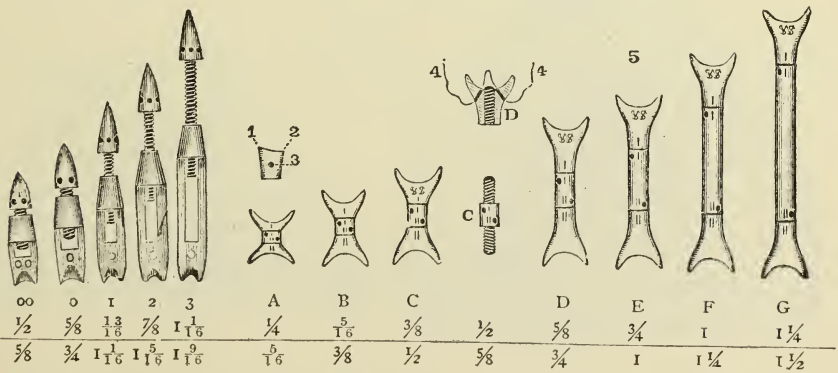
Old Style Jack Screws ...each $1.00



No. 1 No. 2 No. 3

Jack-Screws.

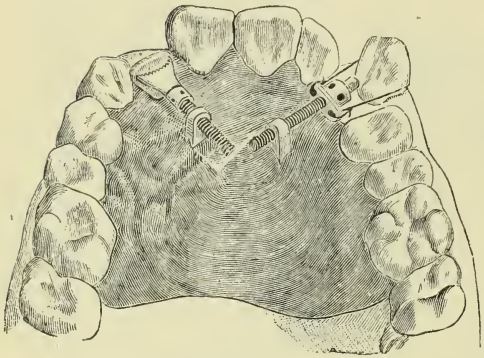




Each Jack-Screw length *closed* is indicated above the line in fractions of an inch; the *open* length is found below the line.

PRICES.

Old Style Jack-Screws, Nos. 00 to 3	each $1.50
Modified McCullom Jack-Screws, A to G	" 1.50
Jack-Screw Pin-Wrench (Fig. 5)	" .20



The Lee-Bennett Jack-Screw.

For attaching to rubber plate and used for *pushing* a natural tooth to its proper position. The separate cut is exact size of the appliance.

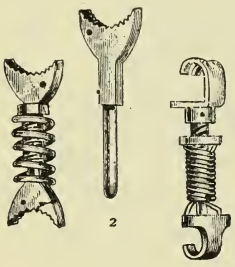
Price..... ....each $2.25

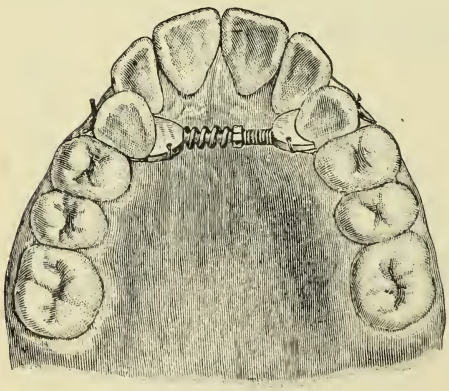
Lee's Improved Regulating Screw and Pull Back.

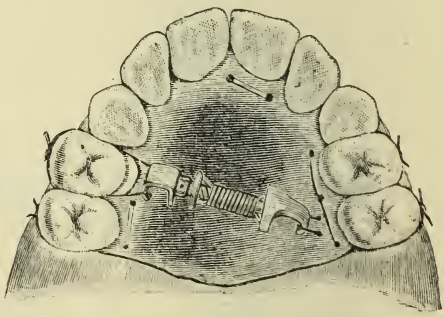
We have omitted separate cut of this device, as it is shown in above cut in connection with the Lee-Bennet. The Lee Pull Back is used, as its name suggests for attaching to rubber plate and *pulling* a natural tooth to its proper place.

Price.... ....each $2.00

Holmes' Spring Jack Screws.





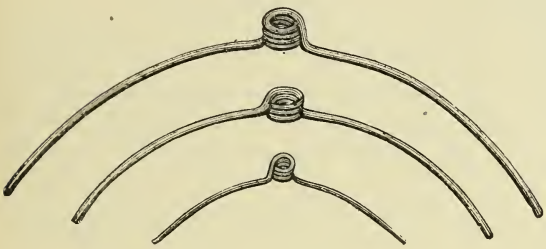


These screws combine the screw and spring methods for moving teeth. The turning of the screw causes a forceful action to the extent only of the screw thrust.

PRICES.

The Set, complete	$5.00
Pushing Spring Jack (Short or Long Head)	1.75
Extra Heads, each	.50
Pulling Spring Jack, No. 3	2.50
Wrench	.25

The Norton-Talbot Regulating Springs.



These springs are made of piano-wire, in three sizes, as shown by the cuts. The How Screw-post (preferably the solid-headed screw-post) may be employed to fix the spring.

PRICE.

Either size, nickel-plated.each $0.15

Spring Wire Coiler.

Made with four mandrels of different sizes, and used for coiling piano-wire for use in regulating. The uses of this device are manifold.

Price ....each 1.75

Piano Wire Cutter.

A special cutter with strong shearing blades, in each of which are half round notches that effect a clean cut. This is a useful tool and will soon save its cost in lieu of spoiled shears and nippers.

Price..... ....each $1.75

Best Quality Piano Wire for the Coffin Split-Plate.

We are prepared to supply five sizes of wire for regulating teeth by the Coffin Split-plate method. Put up in bundles containing two pieces, 7½ inches long, of each of the five sizes.

Price, per bundle.....$0.20

Gold Ligature Wire.

As this Wire is strong and pliable, it is better adapted for ligatures than platinum wire, which is generally used. Anneal before using. It it put up without being annealed, to keep it in shape.

Price, per dwt.....$..1.60

Gilling Twine.

Adapted for ligatures for correcting irregularities; for holding rubber dam in position; also, for passing between teeth to discover imperfections in the enamel, and for cleaning and polishing. Three sizes: coarse, medium and fine.

Put up in plaits, convenient for use, in lengths of 24 inches.

Price, per plait $0.10
Price, per ½ lb. ball, coarse or medium..... 1.00
Price, per ½ lb. ball, fine..... 1.25

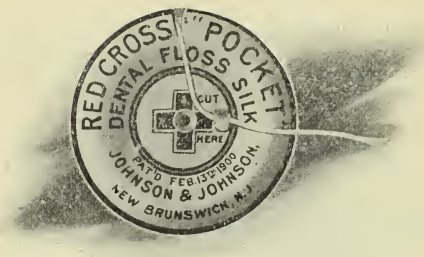
Dental Floss Silk.

Our name on the end of a spool of silk means simply best silk. We can buy silk for less money than we have to pay for this, but we can't buy better silk. It is made for our sales.

PRICES.

		Per Gross.	Per Half-Gross.	Per Dozen.	Per Spool.
Plain.	12-yd.....	$7.00	$ 3.75	$0.75	$0.08
	24-yd.....		6.25	1.35	.15
	150-yd.....		38.25	8.00	.75
Waxed.	6-yd.....		3.00	.60	.06
	12-yd.....	9.50	5.00	1.00	.10
	24-yd.....		9.50	2.00	.20
	150-yd.....		45.50	9.50	.90

Red Cross Pocket Dental Floss.

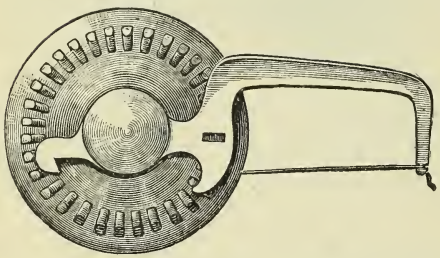


An Art Metal Holder filled with 10 yards waxed silk for 10c.

You want your patients to use Floss Silk for their own good (and also for the good of your work). YOU know its advantages, explain it to THEM. In this form it is more convenient than toothpicks, and far better. It's a pleasure to use it.

It is cheap enough to give away.

Price..... .....per dozen $1.00



Floss Silk Holder for the Pocket.

A very excellent device for carrying Floss Silk to be used for cleansing the teeth.

Price..... .....each $1.00
Price, Plain Round Holder.... .25
Price, Plain Round Holder, with cutter .... .50

Plain Floss Silk Holders.

No. 1. A holder for the pocket, made of steel, nickel-plated, carrying six yards of waxed floss silk.

Price..... .....each $0.30
Price, in 1 dozen lots..... 3.00

No. 2. Similar to No. 1, with addition of cutter.

Price..... .....each $0.50

Double-Screw Matrices.

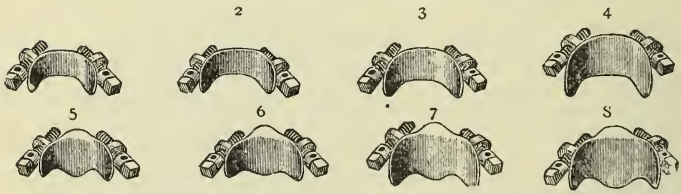
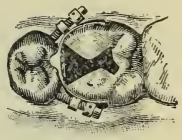


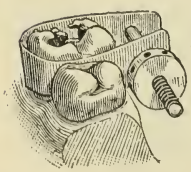
FIG. A.



These Matrices are especially useful in filling extensive cavities with weak walls in teeth of poor structure. Fig. A shows the method of application.

PRICES.

Per set of 8 Matrices and Key-Wrench.....$6.50
Double-Srew Matrices..... .....each .75
Key-Wrench for same..... " .50



Pinney's Loop Matrix.

The Loop is made of soft steel which can be bent and adapted with pliers. The Windlass-nut can be turned by inserting a point in the edge holes.

Price, nickel-plated..... .....$1.50
Price, Extra Loops.....each .15

Manufacturers of Pure Silk Threads and Fabrics.

John D. Cutter & Co.,

1 Union Square, New York.

My experience in making Silk Floss for Dentists' use covers nearly 30 years. Many have been the suggestions and criticisms with which I have been favored, and many the experiments and endeavors whereby I have sought to attain such perfection as should satisfy the most fastidious. My ***Latest, Best*** and most ***Elegant*** production I now offer to the Trade—viz:

WAXED SILK FLOSS IN INDIVIDUAL BOXES OF POLISHED WOOD.

Three Sizes—viz: Fine, 40 yds. Standard, 20 yds. Coarse, 10 yds.

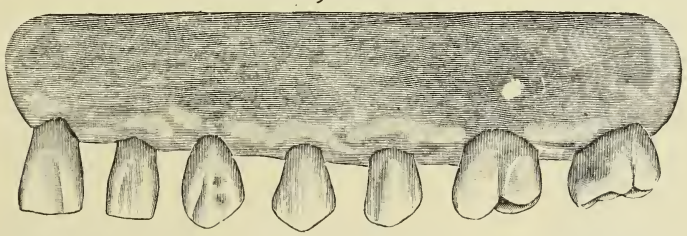
PRICE, TWO DOLLARS PER DOZ.

Large spools for office use one dollar each—the fine containing 2,407 yds., and the standard 1,607 yds. May be ordered of any Dental Depot.

John D. Cutter

Week's Rubber Tooth Forms.

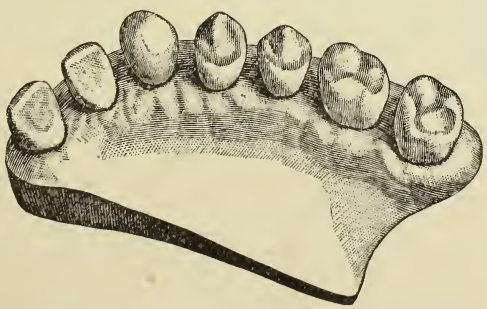
H. D. Justi & Son.



For use by Students in the manual training system of Operative Technics. Adopted by National School of Dental Technics. These forms are designed to take the place of the tooth-brush handle formerly used.

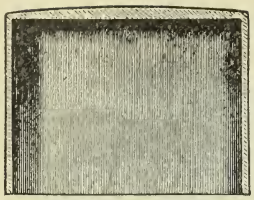
Price.....each $0 50

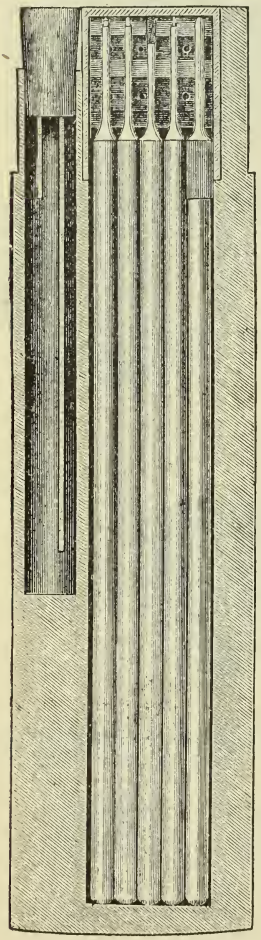
Technic Tooth Forms.



The Forms are made of a light-colored vulcanite, which is hard enough to afford sufficient strength in the margins of the cavities to be cut, and with a sufficient body of materal behind them to give all the solidity required in filling them.

Price, each $0.80





Case for Anchor Screw Appliances.

The instruments are held in a narrow compartment, at the upper end of which (under the points of the instruments) is a recess for holding the little boxes in which slotted Anchor Screws are sold. One of these with the lid removed is set into the recess. A cylindrical compartment is provided for carrying lengths of Anchor Screw-wire, with a cork stopper, which not only keeps dust out but supplies a ready method of handling the wires.

Made of wood (size of cut), leather-covered, with slip-top.

PRICE.

Case.....$0.50

Complete, including set of 5 Screw Appliances, 6 Gold Screws No. 1, 2 inches Gold Anchor Screw Wire and Case 4.90

Screw-Wire Posts, Etc.

Screw-Wire.

	No.	Length.	Diam.	Threads to inch.	Price per rod.
Morrison's 12-K. Gold	1	3 in.	.052		$1.50
" " "	2	3 "	.042	112	1.20
" " "	3	3 "	.035		1.00
Talbot's 18-K. "	4	2 "	.060		1.50
" " "	5	2 "	.058		1.50
" " "	6	2 "	.051	54	1.00
" " "	7	2 "	.046		1.00
" " "	8	2 "	.041		1.00
Anchor " "	9	2 "	.030	100	1.00
" Iridio-Platinum	10	2 "	.030		1.25

Screw-Posts.

	No.	Length.	Diam.	Threads to inch.	Price each.
How's 14-K. Gold	AA		.051		$0.45
" " "	A	$\frac{7}{8}$ in.	.058		.55
" " "	B		.065		.65
" Bright Metal	AA		.051		.15
" " "	A	$\frac{7}{8}$ in.	.058	48	.15
" " "	B		.065		.15
" Crown Metal	AA		.051		.50
" " "	A	$\frac{5}{8}$ in.	.058		.60
" " "	B		.065		.70

Screw-Posts with Heads.

	No.	Length.	Diam.	Threads to inch.	Price each.
Bright Metal	AA		.051		$0.35
" "	A	$\frac{5}{8}$ in.	.058	48	.35
" "	B		.065		.35

Anchor Screws.*

	Length.	Diam.	Threads to inch.	Price each.
Gold	$\frac{1}{10}$ in.	.030	100	$0.20
Iridio-Platinum	$\frac{3}{20}$ "	.030		.25

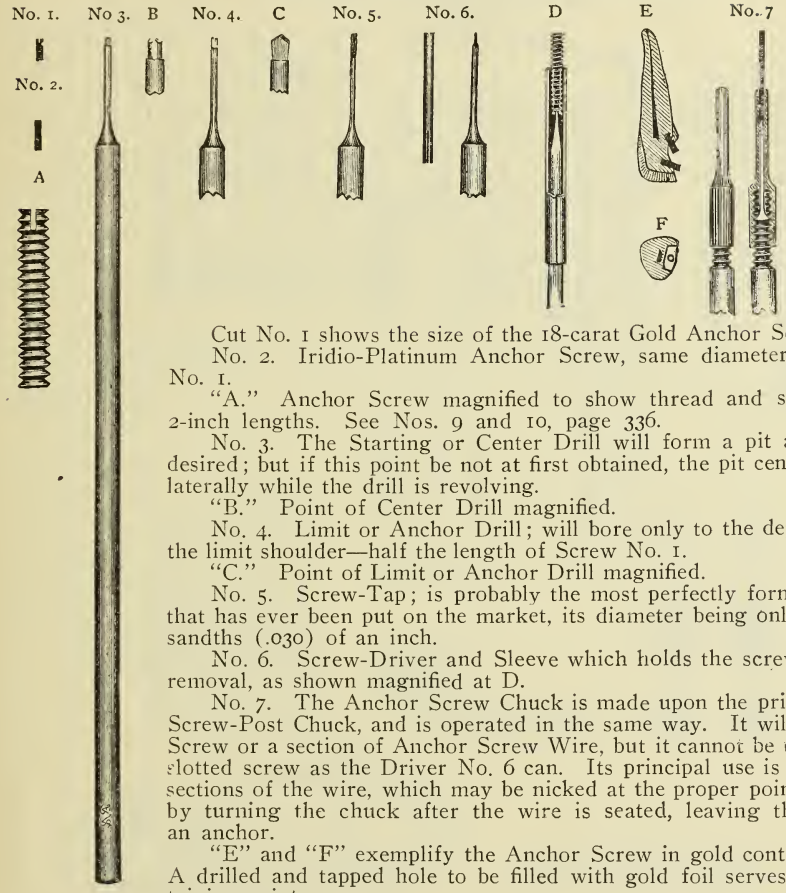
Nuts for Screw-Posts.

Gold, three sizes, AA, A, B,..... } .....each $0.50
Bright-Metal, three sizes, AA, A, B... } ..... " .12

The Morrison Screw Wires are used with the taps and drills of the instruments known as the St. Louis system—listed on next page.

*Anchor Screws, both Gold and Iridio-Platinum, are put up in boxes of 6 screws each.

Anchor Screws and Appliances.



Cut No. 1 shows the size of the 18-carat Gold Anchor Screw.

No. 2. Iridio-Platinum Anchor Screw, same diameter, but longer than No. 1.

"A." Anchor Screw magnified to show thread and slot. Also sold in 2-inch lengths. See Nos. 9 and 10, page 336.

No. 3. The Starting or Center Drill will form a pit at the exact point desired; but if this point be not at first obtained, the pit center may be moved laterally while the drill is revolving.

"B." Point of Center Drill magnified.

No. 4. Limit or Anchor Drill; will bore only to the depth determined by the limit shoulder—half the length of Screw No. 1.

"C." Point of Limit or Anchor Drill magnified.

No. 5. Screw-Tap; is probably the most perfectly formed tap of its size that has ever been put on the market, its diameter being only thirty one-thousandths (.030) of an inch.

No. 6. Screw-Driver and Sleeve which holds the screw for insertion or removal, as shown magnified at D.

No. 7. The Anchor Screw Chuck is made upon the principle of the How Screw-Post Chuck, and is operated in the same way. It will drive an Anchor Screw or a section of Anchor Screw Wire, but it cannot be used to back out a slotted screw as the Driver No. 6 can. Its principal use is in screwing home sections of the wire, which may be nicked at the proper point, and twisted off by turning the chuck after the wire is seated, leaving the cut-off end as an anchor.

"E" and "F" exemplify the Anchor Screw in gold contouring operations. A drilled and tapped hole to be filled with gold foil serves as a superior retaining point.

The handles are made smooth to prevent a breaking twist or the stripping of the threads of dentin by excessive force in turning the tap.

PRICES.

No. 1.	Go'd Anchor Screws ..... each	$0.20	No. 6.	Anchor Screw-Driver and Sleeve ..... each	$0.30
" 2.	Iridio-Platinum Anchor Screws ..... "	.25	" 7.	Anchor Screw Chuck ..... "	1.00
" 3.	Center Drill ..... "	.25	The set of five instruments (Nos. 3 to 7) ..... per set		2.25
" 4.	Anchor Drill ..... "	.25	Center Drill No. 3 and Anchor Drill No. 4 are also made for use with engine, price ..... each		.25
" 5.	Anchor Tap ..... "	.50			

In ordering, state for which Hand-piece they are desired.

St. Louis System of Retaining Screws.

In this set of instruments the drills, taps and wire fitted for each other bear corresponding numbers, as 1, 2, 3.

The wire-holder is made adjustable to take either size of wire.

The cutting-edges of the cutting-pliers are formed with two round openings. The long wire to be used, if put in one of the openings, can be "nicked" at the proper distance to form the screw while in the wire-holder, so that, after having been screwed into place, it may readily be broken off, without the use of file or pliers in the mouth.

PRICES.

Complete set, including 3 Drills, 3 Taps, 1 Wire-holder, 1 pair Nippers, and 3 Gold Screw Wires, 3 inches long with Morocco Case		$12.00	
Wire-holder	$1.50	Taps ..... each	$0.75
Drills ..... each	.25	Nippers, nicked-plated ..... "	2.00

For prices of Morrison Gold Wire see page 336.

Dr. How's Tooth, Crown and Retaining Screw Appliances.

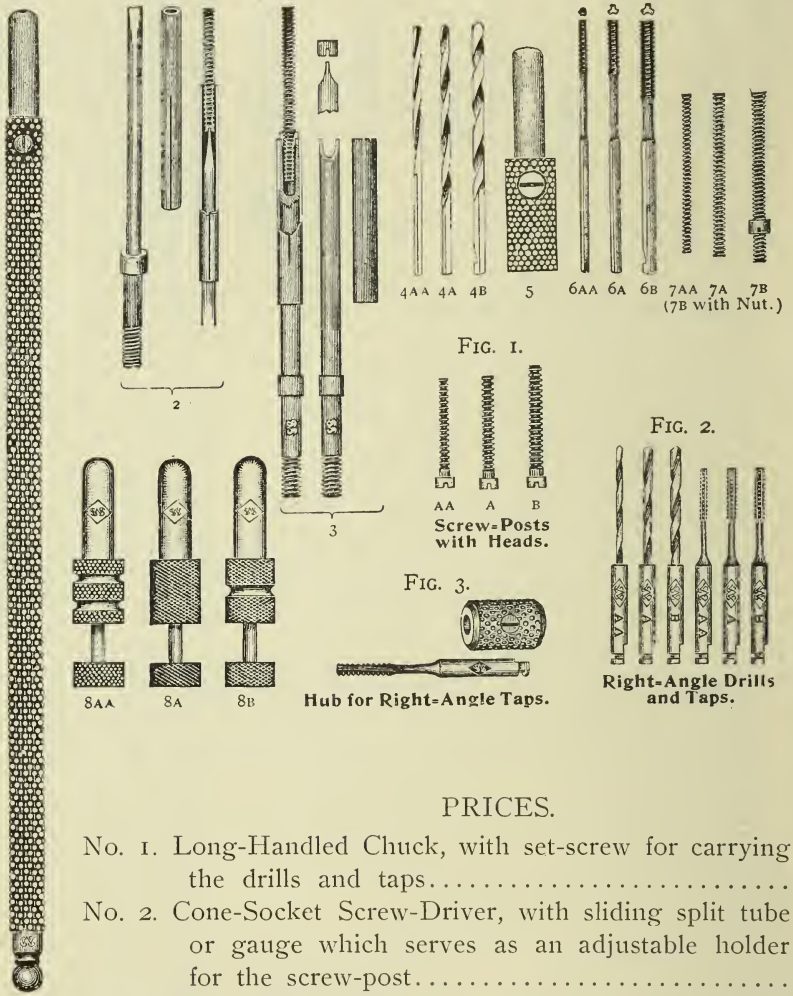


FIG. 1.

FIG. 2.

FIG. 3.

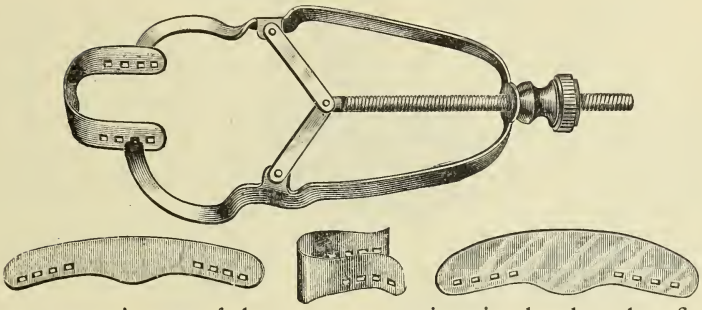
PRICES.

No. 1. Long-Handled Chuck, with set-screw for carrying the drills and taps.....each $0.75
No. 2. Cone-Socket Screw-Driver, with sliding split tube or gauge which serves as an adjustable holder for the screw-post..... " .50
No. 3. Nut-Driver, with Split Tube for Cone-Socket Handle, 3 sizes for Screw-Posts with Nuts..... " .50
No. 4. Twist Drills, 3 sizes..... " .20
No. 5. Drill Chuck with Set-Screw..... " .50
No. 6. Screw-Taps, 3 sizes..... " .50
No. 7. Screw-Posts ..... " .15
No. 8. Screw-Post Chucks, 3 sizes..... " 1.50
Fig. 1. Screw-Posts with Heads ..... " .35
Fig. 2. Right-Angle Drills, 3 sizes, AA, A, and B..... " .30
Fig. 2. " Taps, 3 " AA, A, " B..... " .50
Fig. 3. Hub for Right-Angle Taps..... " .20

Nuts for Screw-Posts. For sizes and price, see page 336.

Ivory's Matrix Retainer, No. 1.

Patented April 1, 1890.

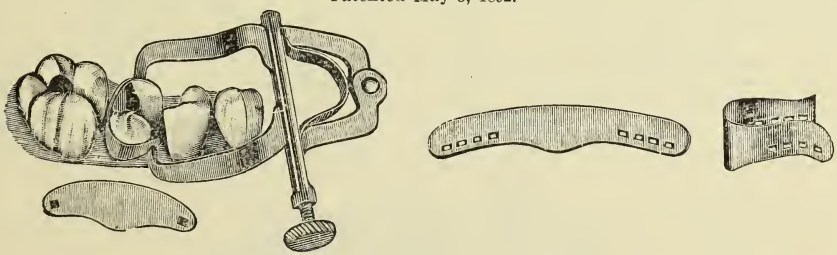


This instrument is one of the most convenient in the dental oufit, as a band can be applied to the tooth in such short order, and that with as pretty an adaptation of the latter to the tooth as any could desire. Appearances are against the Instrument in regard to length and size, yet it requires length to reach back to the distal teeth. There is no dependence on any other tooth in order to work this retainer, clasping a band for an anterior or distal cavity in a tooth equally as well. One dozen Bands made of the finest quality of steel from 3 to 4-1000th of an inch in thickness, going with each Holder. Having made a great improvement in my Bands, by a process of toughening the steel, I can offer a better article than heretofore. The application is so evident, instructions are unnecessary.

Price $2.00
Bands, per doz ..... .25

Ivory's No. 2 Matrix Retainer.

Patented May 3, 1892.



This Instrument is a modification of my other Retainer, to be used on Cuspids, Bicuspids and First Molars.

INSTRUCTIONS.

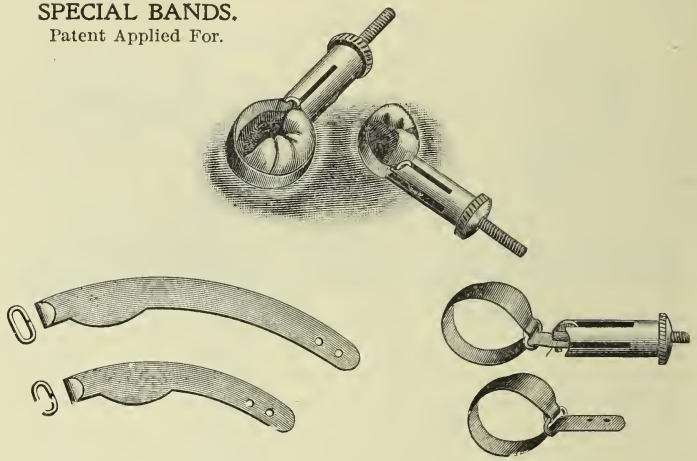
In applying band to the Retainer, hold the band at right angles with the arms, so that the oblong points of the latter fit in the oblong holes of matrice, then bring the matrix horizontal with the arms, and the band is locked to the Retainer. With the band thus attached to the Retainer, fasten to the tooth. The points of the instrument bearing against the adjacent sides of the tooth hold the Matrix firmly. Remove from the tooth by loosening the screw, the spring throws the jaws apart, straightening the band, when it comes away without any injury to the filling, should it be of plastic material.

NOTE.—The screw will operate in either end of the yoke, thus making the instrument universal.

Price, with One Dozen Bands $2.00
Extra Bands, per doz ..... .25

Ivory's Matrix Retainer No. 3.

SPECIAL BANDS.
Patent Applied For.



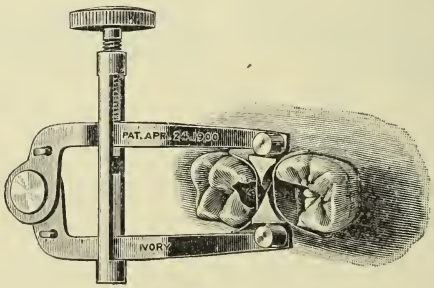
The above Retainer with the accompanying Bands makes a very serviceable addition to the supply of any office. While it is especially adapted for use on Bicuspids it may be used also on Molars.

This device will be found to hold the Band firm and give as pretty an adjustment of the Band to the neck of the tooth as possibly can be made. Ordinarily, Band Matrices cut into the gum on some one or more places, which cannot be said of these. No operator ever put a Band on a tooth with a more true or as neat a fit as can be made by this instrument.

Price of Retainer, with one dozen bands.....$1.50
Bands, per doz..... .50

Dr. W. P. Dickinson Wedge Matrix Retainer.

Manufactured only by J. W. Ivory.



The wedges are pivoted so as to turn to the front or back and also have a rotary movement, and are also concaved so as to fit the convex surface of the tooth and will adapt the Band to the teeth no difference how irregular they may be.

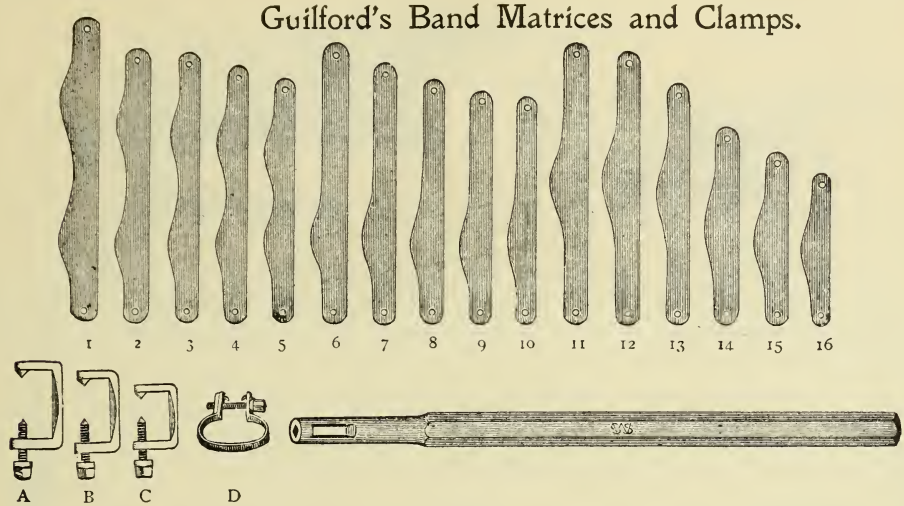
Price, including 1 doz. bands.....$2.50
25 Bands extra, put up in envelopes..... .25

Matrix Steel.

We furnish a superior grade of thin steel for matrices. It is put up in a package containing 5 pieces 6x3½ inches, assorted thicknesses.

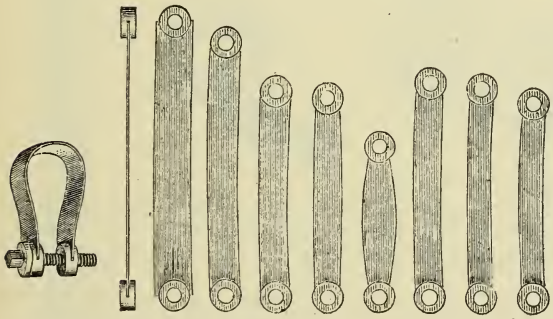
Price per package $0.50

Guilford's Band Matrices and Clamps.



PRICES.

Set of Matrices, complete, 4 Holders, 16 Bands, 1 Key		$5.35
Holders, A, B, C	each	.75
Holder, D	"	1.25
Bands	"	.10
Key	"	.25

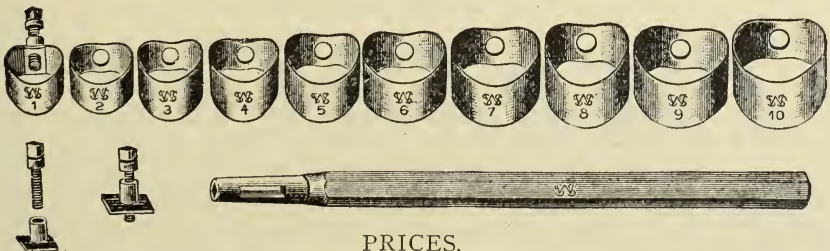


Loop Matrices.

Dr. Creager's Loop Matrices comprise eight sizes of thin, flexible steel bars operated by a screw and key. One eye in each bar is smooth, the other threaded to fit the screw.

Per set of eight Loops, including Screw and Key		$2.50
Loops, separately	each	.25
Screw, separately	"	.25
Key	"	.25

Dr. Brophy's Improved Band Matrices.

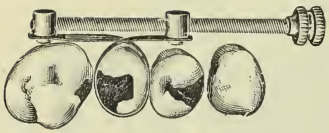


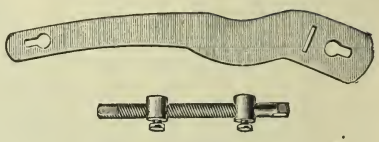
PRICES.

Per set, complete, 10 Bands, 2 Screws and 1 Key		$2.25
Bands	each	.15
Screws	"	.25
Key	"	.25

The Lodge Band Matrix.

Lee S. Smith & Son, Sole Agents, Pittsburg.
Patented May 11, 1897.





This is the only matrix we know of with which a filling may be contoured. It is impossible to make a picture that will do justice to it. It is impossible to make a cut showing how the matrix hugs the tooth at the cervical margin, or to tell why the shape of the band and the method of securing it cause the matrix to assume the contour shape for which it is celebrated.

The Lodge Band Matrix is absolutely positive in its action. It is universal. It can be used in any part of the mouth. It gives absolutely perfect results in any position.

A set consists of two screws, one for molars, to be operated with the wrench, and one for bicuspids, where the wrench is not necessary.

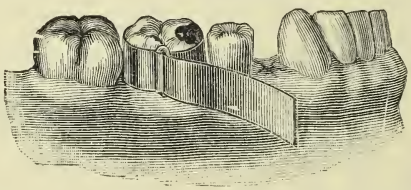
Four bands, two molars, right and left, and two bicuspids, right and left, and a wrench, all in a neat case.

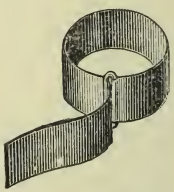
Price, complete.....$2.00

Extra bands may be secured at 10 cents each.

The Weirich Single Band Matrix.

Made by H. D. Justi & Son.





Patented Oct. 15, 1889.

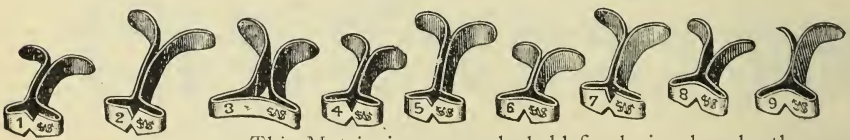
As will be seen by the illustration this is a simple band of metal with a loop at the end. It is the most easily applied, will fit any tooth, and cannot possibly injure the teeth. The metal alloy of which the band is made is so composed and tempered that it may be bent many times in the same place without breaking.

To apply the Matrix, place the band between the teeth, bringing the loop to the buccal side of the tooth to be operated upon; pass the other end through the loop drawing the band close around the tooth, then bend it sharply back on the loop and it will remain firmly in place.

To remove the Matrix merely reverse the movement, straighten the band and slip it off. This Matrix may be properly called the best, as it excels in simplicity of construction, facility of application and perfectly secures the desired results.

Price.....each $0.50

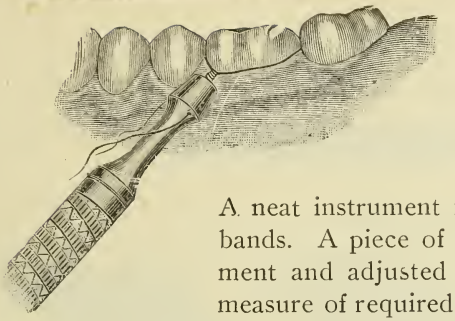
The Miller Matrices.



This Matrix is commonly held firmly in place by the expansion of its duplex spring; but it may be additionally supported by a wedge of wood between the springs. The side cut shows method of use. The metal will not amalgamate, rust, nor be found incompatible with any proper filling material

Miller Matrices, Thick, per set of 9.....$2.25
Miller Matrices, Thin, per set of 9..... 2.25
Miller Matrices, separately, each..... .25

In ordering, please specify as "Thick" or "Thin."



Band Measuring Appliance.

Designed by Geo. W. Weirich, D.D.S.

A neat instrument for taking correct measurements for bands. A piece of binding wire is placed in the instrument and adjusted around the root, giving the perfect measure of required band.

Price.....50 cents.

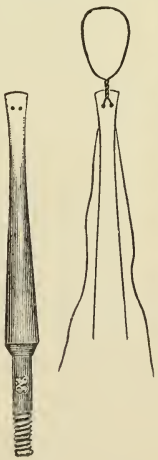
H. D. Justi & Son,

Philadelphia. Chicago.

Exact Dentimeter.

In the Exact Dentimeter the ends of the wire are passed into the hole in the face of the head, and out through the openings which are cut into it from two sides. The loop thus formed is adjusted around the tooth or root, the end of the Dentimeter is pressed against the root at the gum-margin, the loop pulled tight and the ends of the wires wound around the boss on the handle. A few turns of the Dentimeter twists the loop tight, when the wires can be unwound from the boss, the Dentimeter laid aside, and the loop removed. Head and boss of brass nickel plated, handle of ebonized wood.

Price $0.50



Handy Dentimeter.

In the Handy Dentimeter, the wire ends are passed through the holes in the flattened head, and after the loop is adjusted and tightened, twisted firmly, holding the strands with the fingers.

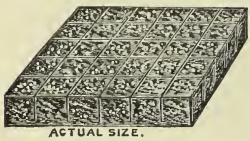
Made only for Cone-Socket Handles.

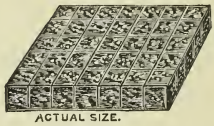
Price $0.35

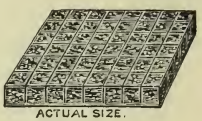
Watt's Crystal Gold.

Strip Gold.

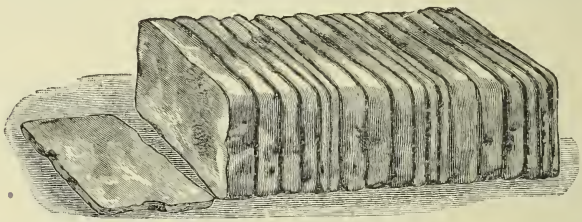
Gold Cubes.







Sliced Gold.



The above cut shows our *new* forms of Crystal Gold. We also manufacture the "bulk" or "regular" form.

From our experience of over one-half of the century in manufacturing gold in special forms for Dental work WE CLAIM that our Crystal Gold:

Can be used exclusively in ALL OPERATIONS from a pin-head cavity to contour work with perfect results.

Is susceptible of the most beautiful and perfect FINISH with care and the use of proper instruments.

Does not ball or CRUMBLE.

Under the microscope presents a fernlike or feathery APPEARANCE which insures an article which is UNIFORM in texture and working properties.

Saves TIME. Time is MONEY for both dentist and patient.

For ease of MANIPULATION, high FINISH and COLOR cannot be excelled.

Is PURE. Strictly 1,000 fine.

After trial will be found INDISPENSABLE because of its perfect adaptation to walls of cavity, its cohesiveness and easy working qualities.

Our statements are substantiated by innumerable testimonials from patrons, some of whom have used our gold for over forty years. Many say that difficult operations performed with our gold twenty to forty years ago are now found in as perfect condition as when completed.

Watts' Crystal Gold is sold by all reliable dental depots or sent direct by us on receipt of remittance.

	⅛ oz.	½ oz.	1 oz.
"Crystal Gold" (Bulk)	$4.00	$15.00	$30.00
"Crystal Gold Cubes"	4.00	15.00	30.00
"Crystal Gold Strips"	4.00	15.00	30.00
"Sliced Crystal Gold"	4.00	15.00	30.00

Cubes are put up in three sizes: "large," "medium" and "small."

When specially ordered two other sizes will be furnished, which are designated as "½ medium" and "½ small."

Crystal Gold is sold in four different grades of condensation. No. 1 is softest having been less exposed to heat when annealing. No. 4 is hardest. No. 1 and No. 2 are usually preferred

A. J. WATTS,

Terms:
Draft on New York or Money Order.

Office, 401 E. 28th St., cor. 1st Ave.,
New York City.

Nickolds' Improved Soft Gold Foil.

Nickolds' Improved Soft Gold Pellets.

The manufacturer claims in this special Foil to have developed in the highest degree yet known the peculiar excellence of Gold as a Dental Filling. It combines, in a greater degree, the softness and adaptability of sponge gold, with a condensing and cohesive quality unequaled by any adhesive gold, and it is conceded by the best operators to manipulate more easily and with better results than any foil extant.

Warranted absolutely pure, 1000 fine.

Chemically prepared and manufactured only by

ALFRED J. NICKOLDS,

347 Gates Avenue, - - - Brooklyn, N. Y.

PRICES.

⅛ Ounce	$ 4.00
¼ "	15.00
1 "	30.00
2 Ounces at one time, per oz	29.00

For sale by all leading Dental Depots and by the manufacturer.

Sibley's Felt Gold.

This GOLD was introduced thirteen years ago, and the demand for it has yearly increased in a way that indicates decided merit. It is very cohesive, condenses easily, does not "ball," hence saves much time in operating. For use with "Felt" Gold you need only the ordinary fine pluggers with shallow serrations preferably as large faced as the size of the cavity will admit, until the Gold is united, then use smaller points to condense. It is pure, hence retains color, and is the queen as well as the pioneer of the Plastic Golds.

PRICES:

⅛ Ounce	$ 4.00
½ "	15.00
1 "	30.00
2 Ounces at one time	58.00
1-40-ounce (sample package)	1.00

"Sibley's" Pure Gold Foil.

The Gold filling is necessarily the most costly filling. First, because of the greater cost of the material, but more especially on account of the time and skill required in making it. If you use Gold Foil, the very best made is none too good for you. Since it is difficult enough to make good Gold fillings with the best Gold, don't lose time experimenting. The above Foil is strictly reliable, and made in both soft and cohesive and regular and untrimmed forms. Nos. 3, 4, 5, 6, 8 and 10 kept in stock.

PRICES:

Pure Gold Foil, Regular, in all numbers, Soft and Cohesive:

⅛ Ounce	$ 4.00
½ "	15.00
1 "	29.00
2 Ounces at one time	56.00

Pure Gold Foil, Untrimmed, in all numbers, Soft and Cohesive:

⅛ Ounce	$ 3.50
½ "	14.00
1 "	27.00

"Sibley's" Pure Gold Cylinders.

This GOLD, prepared by an entirely new process, is pronounced by experts to be better adapted to the walls and inequalities of all cavities than any Gold yet produced in cylinder form.

Gold Cylinders, Soft and Cohesive, made in numbers ¼, ½, ¾, 1, 2, 3 and assorted.

PRICES:

⅛ Ounce	$ 4.00
½ "	15.00
1 "	29.00
2 Ounces at one time	56.00

Personal Note to Dentists.

For 25 years I have been a Refiner of Gold. This precious "King of Metals," while it is soft and most ductile, requires great skill and experience to bring it to a HIGH STANDARD OF EXCELLENCE.

This refining or purifying is done by a special process, the result of long study, by which I am enabled to attain—that necessity, especially in dental work—ABSOLUTE PURITY.

My goods are all guaranteed to be as fine as can be made, by any one, anywhere. They have no superior, and are looked upon and recommended by thousands who have used them in all leading cities as being of the highest grade, always thoroughly reliable and the acme of perfection.

THE VALUE OF GOOD GOLD.

First-class, carefully prepared foil, always in good working condition, should be urged into common use. This is the kind I manufacture, and it is my policy to keep the matter before American dentists, as in this age of "plastic" golds it is easy to be deceived.

THE VALUE OF EXTRA PLIABLE.

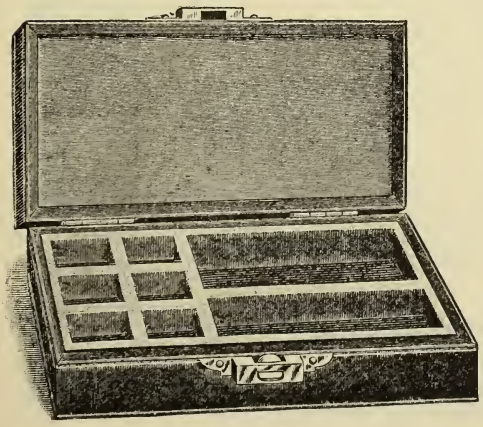
The great value of extra pliable gold lies in its being already in the metallic form, while the "plastics" need to be burnished. Precipitated forms of gold of recent manufacture, or as made for thirty years or more, are not as desirable as foil or its preparations as regards quality of work.

Rivals making inferior goods have adopted my trade-mark name of "Extra Pliable" with slight variation. The only genuine goods bear my name and address.

PRICES:

	1-10 oz.	½ oz.	1 oz.	2 ozs.	5 ozs.
Rolled Gold	$3.20	$15.00	$29.00	$56.00	$137.50
Gold Foil	3.20	15.00	29.00	56.00	137.50
Extra Pliable Gold Rolls	3.60	17.50	34.00	66.00	160.00
Gold Rolls	3.20	15.00	29.00	56.00	137.50
Untrimmed Gold Foil	2.90	14.00	27.00		
Cohesive Magnetic Gold	3.20	15.00	29.00	56.00	137.50
Gold and Platinum, shades 1, 2 and 3	3.20				
Plastic Gold	4.20	20.00			

EDWARD ROWAN, 831 to 837 East 163d Street, New York.



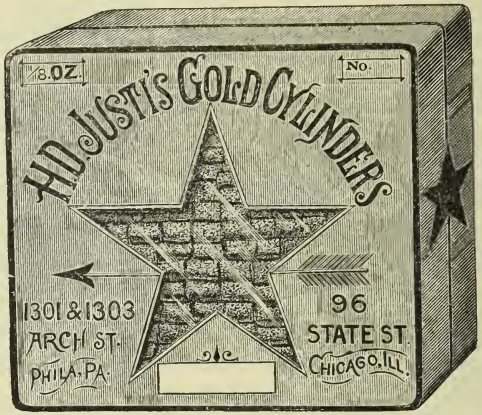
Gold Case.

Here is a handsome Case, made in first-class style, for the convenient and cleanly keeping of gold pellets, cylinders, etc. Six small and two large compartments.

Size 4½x2⅝x1⅛ inches; leather covered, velvet lined. Two colors leather, red and black.

Price $1.50

H. D. Justi & Son's, Gold Foil and Cylinders.



For the convenience of those who prefer their gold in the cylinder form we have prepared the following grades:

Soft, Cohesive, Semi-cohesive. Nos. ¼, ½, ¾, 1, 1½, 2, 3.

We recommend this gold to the profession with the utmost confidence, knowing that one who gives it a trial will need no further proof of its excellence.

These forms of gold are warranted chemically pure, and the operator may rely upon always finding them to work the same, or, in technical phrase, to "run even."

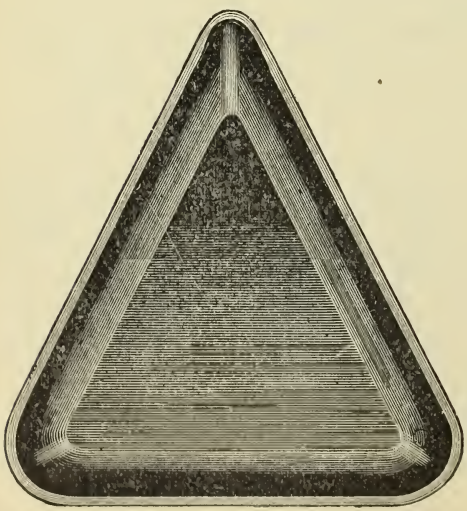
Star Gold Foil.

Made by H. D. Justi & Son.

The Foil is of two grades, soft and cohesive, and in the following numbers:
Soft, Nos. 3, 4, 5, 6, 10, 20, 40, 60.
Cohesive, 3, 4, 5, 6, 10.

PRICES.

Star Gold Foil	pr.	$\frac{1}{16}$	oz.	$	2.00
"	"	⅛	"		3.50
"	"	½	"		14.00
"	"	1	"		27.00
" Cylinders	"	$\frac{1}{10}$	"		3.20
" "	"	½	"		15.00
" "	"	1	"		29.00
" " in 2 oz. lots	"	1	"		28.00
" " in 5 oz. lots	"	1	"		27.50



Gold Trays.

Made by H. D. Justi & Son.

The cut is full size; made of black rubber, and very useful for the different sizes of gold pellets.

Price..... .....each $0.25

SOLILA GOLD

Dear Doctor:

The advertisement on the next page contains information of vital importance in your business.

Read carefully, act promptly, and you will profit largely.

IF dentists would realize the many superior features of "SOLILA" and learn to use it rightly, we are positive that it would be preferred to any other gold material for filling teeth.

"SOLILA" will save at least one-third of your time and labor, and will enable you to do more and better work.

It condenses harder and more rapidly than any other gold.

It always retains its beautiful color.

It adheres perfectly---no leakage between filling and tooth.

Hand condensation may be used throughout.

Fillings may be made entirely of "SOLILA."

Altogether it is the most perfect gold now on the market, but it must be used rightly in order to obtain desired results.

A leading European dentist, in an address on "SOLILA" Gold and its Advantages in Filling Teeth," says: "SOLILA" renders me the greatest service in my practice, and has reduced my daily labor to a considerable extent; and, therefore, I can advise you to give it a thorough trial, and believe that in a short time you will find it most useful."—*Dental Cosmos. Issue of December, 1899.*

In Europe, where "SOLILA" was first introduced, its sales during the first year amounted to one-half the entire output of gold material for filling teeth.

Its sale in America has already reached large proportions, and is constantly increasing. This fact alone is conclusive proof of its superiority.

"SOLILA" has been greatly improved during the last few months, both in quality and in the way it is packed, and it is now unsurpassed.

We ask your careful consideration of our claims, and assure you perfect satisfaction in its use if directions are followed.

Write to-day for prices and full description.

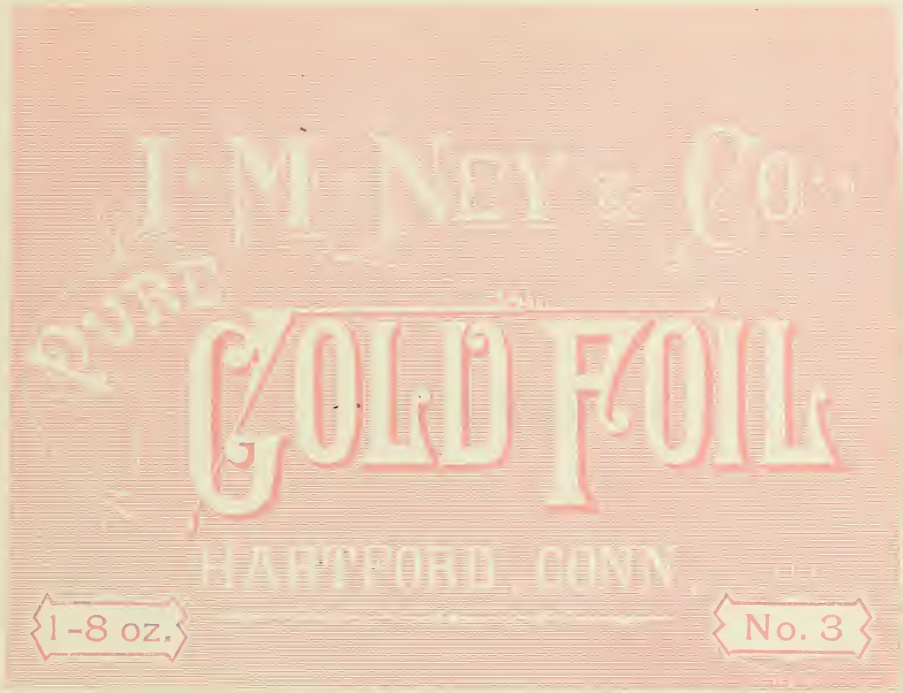
E. de TREY & SONS

No. 3943 Locust Street

Philadelphia, Pa.

PRICES.

Per ⅛-oz.	$ 5.00
Per ¼-oz.	19.50
Per 1-oz.	38.00



SOFT · AND · COHESIVE,

In Any Number Desired.

The "Soft" can be made Cohesive by re-annealing.

. . . Guaranteed to be . . .

Pure, Uniform, Tough, Ductile, Malleable.

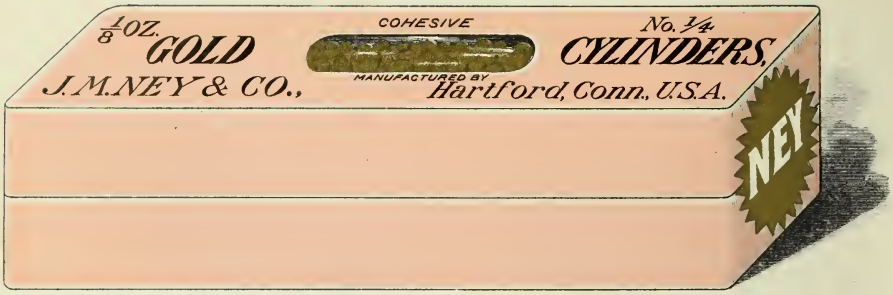
Note Our Prices.

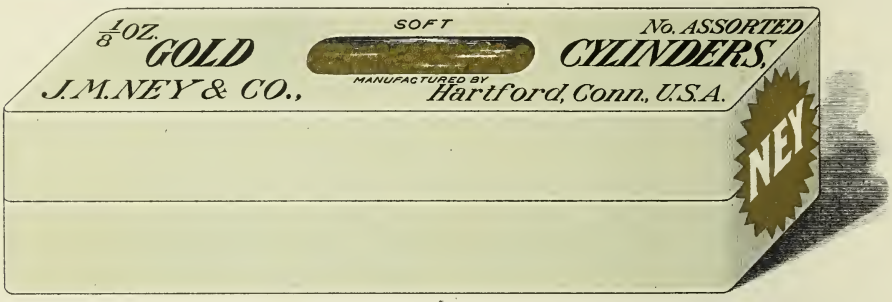
THIS Foil is not only one of the most POPULAR Foils on the market, but is one of the OLDEST brands in this country. For over half a century we have been manufacturing Gold Foil, and the best evidence of its giving ENTIRE satisfaction is found in the fact that the leading members of the Profession prefer it to all others.

PRICES.

$\frac{1}{16}$ oz., . .	$2.00
$\frac{1}{8}$ " . .	3.50
1 " or over, per oz.,	27.00

FOR SALE AT ALL THE LEADING DENTAL DEPOTS.





IN the good old times when dentists made their own GOLD CYLINDERS by hand they rolled them just as they wanted them, just soft enough, of just the right consistency, and so forth.

The manufactured ones made nowadays are not apt to be like the "good old kind," but we are making by a new process, from our brand of gold foil, GOLD CYLINDERS that seem to please the dentists and that "they say" are well-nigh perfect.

They are soft and cohesive and are numbered ¼, ½, ¾, 1, 2, 3, 4, 5, and also assorted, as follows;

PRICES.

1/16 oz.	(Trial size)	$2.00
1/8 "		4.00
¼ "		7.50
½ "		15.00
1 "		29.00
2 "	per oz.,	28.00
5 "	"	27.50

IF YOU HAVE NOT YET TRIED THEM
YOU SURELY SHOULD, AND THAT SOON.

FOR SALE AT ALL THE LEADING DENTAL DEPOTS.

THE KELLOGG & BULKELEY CO., HARTFORD, CONN.

Miscellaneous Gold Filling Materials.

Our space is too limited to admit extended notice of all filling materials we carry in stock. We believe our stock of gold filling materials is more complete than any other house in the trade. Our stock of any one make would be a big stock for the average dental depot.

Hood & Reynolds' Gold Foil.

Soft, cohesive, non-cohesive, crystalline surface, unannealed, folded.

Per ⅛ oz., $3.50; per oz., $27.00.

Hood & Reynolds' Gold Cylinders.

Style A, flattened.....Nos.	¼,	½,	1,	1½,	2
Style A, loose, and can be used as pellets.....Nos.	½,	1,	1½,	2,	3
Style B, loose, but more compact than Style A.....Nos.	1,	2,	3,	4,	
Style C, compact, but not hard, used as cylinders only.....Nos.	2,	3,	4,	5,	6

PRICES.

Cylinders, per ⅛ ounce	$ 4.00
Cylinders, per ½ ounce	15.00
Cylinders, per 1 ounce	29.00
Cylinders, in lots of 2 ounces or more, per ounce	28.00
Tin Cylinders, per ounce	22.00

S. S. White Dental Mfg. Co's.

Regular, per ⅛ ounce	$ 3.50
Regular, per ounce	27.00

Quarter Century, Globe and 1000 Fine Foil and Pack's Gold Cylinders.

⅛ ounce	$ 4.00
½ ounce	15.00
1 ounce	29.00
Lots of 2 ounces	per ounce 28.00
Lots of 5 ounces	per ounce 27.50

Cold Welded Cylinders and Kearsing's Universal Gold Blocks.

⅛ ounce.....$ 4.00 ½ ounce, or over.....per ounce 30.00

Moss Fibre.

⅛ ounce.....$ 4.25 ½ ounce..... 16.50

E. Kearsing's Gold Foil.

⅛ ounce.....$ 3.75 ½ ounce, or over.....per ounce 28.00

Valleau's Gold Foil.

⅛ ounce.....$ 4.00 ½ ounce, or over.....per ounce 30.00

Abbeys' Gold Foil.

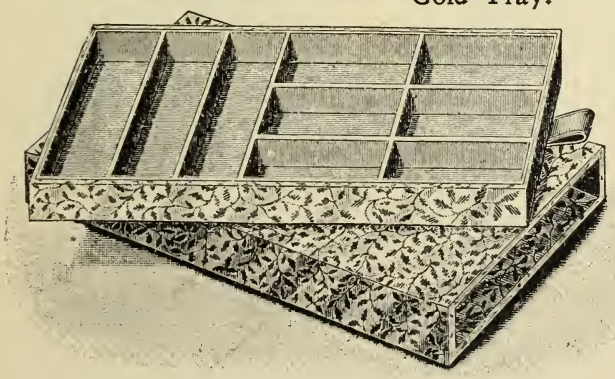
⅛ ounce..... $ 4.00

No quantity rate.

Platinum-Gold Foil.

Platinum-Gold Foil, rolled, Nos. 30 to 60 only, per 1-16 ounce, $2.00.

Gold Tray.



This neat, compact Sliding Tray affords a convenience for keeping different forms of gold filling-materials handy for selection. It has compartments for an assortment of mats, pellets, cylinders, ropes, or strips, so that selection can be made without loss of time.

The Tray is nicely gotten up, with a snug-fitting case, covered with a paper which shows varying designs in different lights. The partitions are covered with gilt paper, and the bottoms lined with soft chamois. Slid into the case, the Tray is protected from dust or the loss of its contents, and occupies only a little space (about 4⅞x3¼x½ inch) in the Bracket Table Drawer.

Price.....$0.25

Chamois Skin Pad.

For Gold Pellets and Foil, to be placed on while operating.

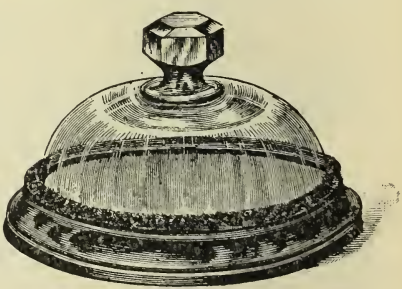
H. D. JUSTI & SON,

PHILADELPHIA. CHICAGO.

This Pad is made of Selected Chamois Skin, with a very soft lining. It is designed to take the place of spunk, and being neater and cleaner, it is much preferred by every one who has used it. The Pad is $5\frac{3}{4}$ inches long and $4\frac{3}{4}$ inches wide, and to protect it from dust, put up in a paper box.

Price .....25 cents

Gold Foil Stand.



A neat and useful little piece of office furniture intended for preserving gold prepared for fillings from dust and moisture. The base is of polished wood, covered on the upper surface with soft spunk, and protected by a glass vase fitted into the base, the joint protected by a ring of chenille. Made in three sizes, the vases measuring respectively 3, 4, and 5 inches in diameter; the height, inclusive of base, from 3 to 4 inches.

Price of the 3 and 4-inch.....each $1.50
" " 5 " ..... " 2.00

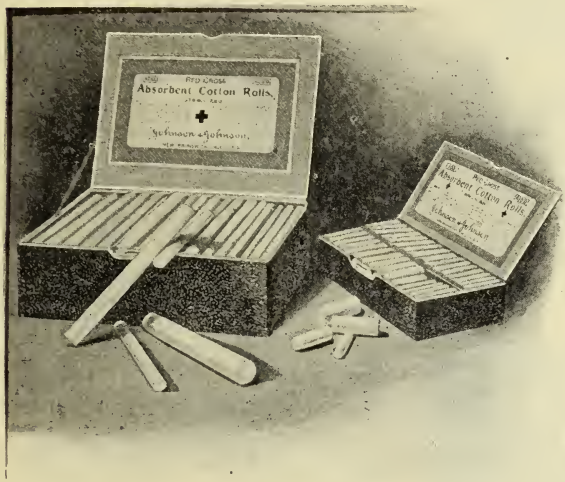
Pellet Placer.

Will be found a valuable assistant in carrying pellets, cylinders, etc. to the cavities to be filled. The delicate points will take up the pellets or tear off bits of the mat gold without in the least compressing it until it is placed in the cavity where condensation is required.

Price .....each $0.40

Red Cross Absorbent Cotton Rolls.

Manufactured by Johnson & Johnson.



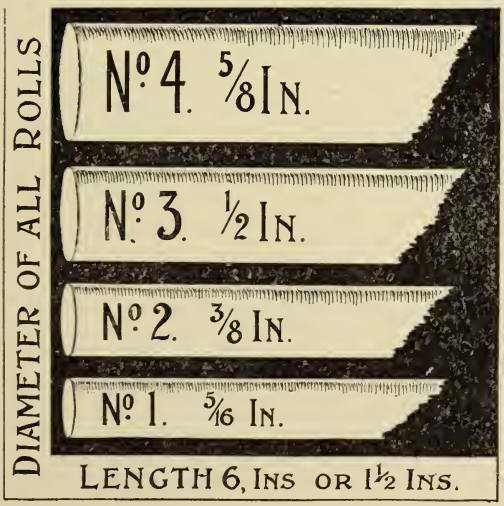
The name of the manufacturers is a guarantee of quality for aseptic cotton preparations.

These rolls are a convenient form of absorbent cotton, a smooth roll without fuzz, to be used as a substitute for the napkin or rubber dam, and in many cases preferable to either. A section of a roll is placed either side of the tooth to be operated upon and a clamp may be used if desired. They will also be found useful in covering the mouths of the ducts. Another way is to bend a roll around the entire outside of the arch or in under the tongue.

Put up 100 in a box, assorted diameters, Nos. 1, 2, 3 and 4.

6 inch rolls, assorted, 100 in box	per box	$0.50
6 inch rolls, all No. 2, 100 in box.....	"	.50
6 inch rolls, all No. 3, 100 in box	"	.50
1½ inch rolls, assorted, or all No. 2 or all No. 3, 100 in box.....	"	.25

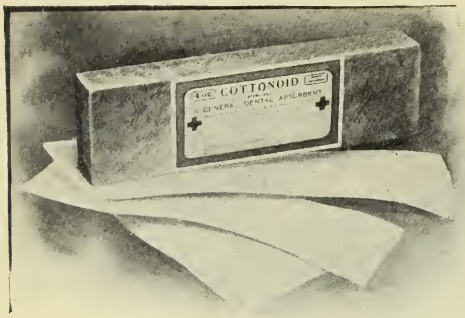
Non-Absorbent Dental Rolls.



Non-Absorbent Rolls are used as a dam instead of an absorbent. Often preferable and entailing far less labor than to use the rubber dam.

They are particularly adapted to crown and bridge work. Instead of the roll being loaded with saliva and conducting moisture to the point of operation, this point is kept dry *and the roll is dry.* The saliva ejector or an absorbent may be used in connection with them.

6 inch rolls, assorted, 100 in box	per box	$0.50
6 inch rolls, all No. 2, 100 in box	per box	.50
6 inch rolls, all No. 3, 100 in box	per box	.50

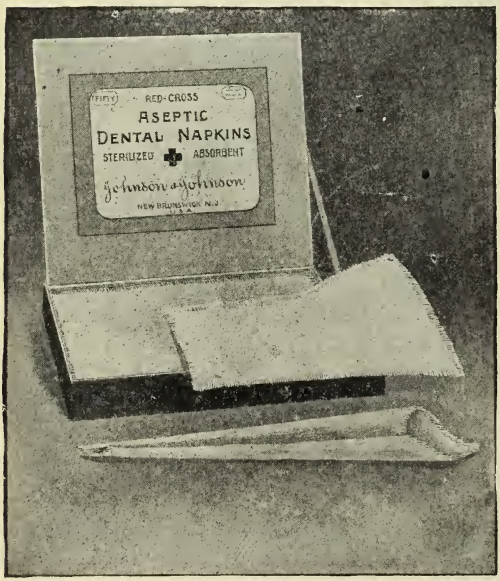


Cottonoid.—(Sterilized.)

We like to sell Cottonoid. We have never known a man to stop using it who ever tried it. We just have to call attention to it once. It is simply felted absorbent cotton. It is a general dental absorbent. It is more highly absorbent than bibulous paper and more convenient in form. We have samples to send if they are asked for.

PRICES.

¼ pound packages .....per package $0.25
1 pound packages (containing four ¼ pound packages).....per pound 1.00



Red Cross Aseptic Dental Napkins.

Johnson & Johnson.

STERILIZED. ABSORBENT.

Absolutely clean—To be used but once and destroyed—Cheaper than washing "the old kind."

Two Sizes:
Small, 6 inches square.
Large, 9 " "

Their adoption and the discarding of the old-time laundered napkin for use WITHIN THE MOUTH is a step in the progress of dentistry that science teaches us is necessary to health and absolute cleanliness.

Put up 50 in a box, 6x6 inches.....per box $0.25
Put up 50 in a box, 9x9 inches.....per box .50

Bibulous Paper.

We import our own bibulous paper. It is the best our money can buy. We don't ask any more for it than other people ask for poorer qualities.

PRICES.

French.....per quire.....$0.15
French.....per ream..... 2.40
Japanese.....per 100 sheets..... .25
Japanese.....per 1,000 sheets..... 2.25
Japanese, 400 small sheets in box.....per box .25

Spunk.

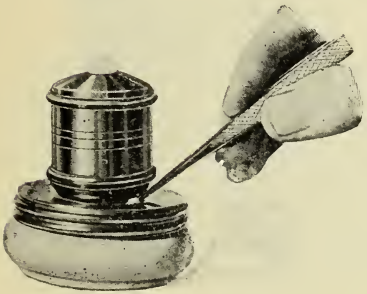
We know good spunk when we see it. We buy none but the best. When we say selected we mean selected.

PRICES.

Selected, the best of the best.....per ounce $0.50
Ordinary, as it comes from the bale.....per ounce .20
Ordinary, in bulk.....per pound 2.25

Spooner's Combined Cotton Holder and Trap.

Lee S. Smith & Son, Sole Agents, Pittsburg.



The upper part contains fresh cotton. The lower part is for the waste.

The fresh cotton is always ready for use. A stab with the pliers takes care of the waste. You push and it pulls. You could hit the place in the dark.

The combination of trap and holder doesn't take up any more room than an ordinary holder alone.

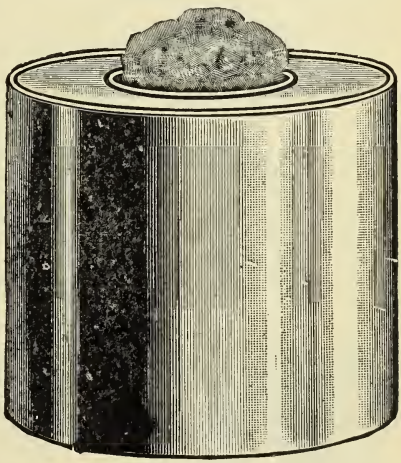
Price, including device to prevent slipping...each, $1.25

Cotton Holder.

H. D. Justi & Son.

Made of brass, nickel-plated. A spring constantly forces the cotton to the opening where it is always ready for use.

Price $0.70



Absorbent Cotton (Plain.)

Johnson & Johnson's Absorbent Cotton is better than ordinary absorbent cotton. It is made for surgical purposes. It is absolutely clean and pure, and it ABSORBS. It is the only cotton that should be used where surgical cleanliness is required. It is the best for the dentist. It costs no more than the common kind.

Price ..... per 1 oz. box, $0.12
Price ..... per 2 oz. box, .20
Price .....per lb. box, .60

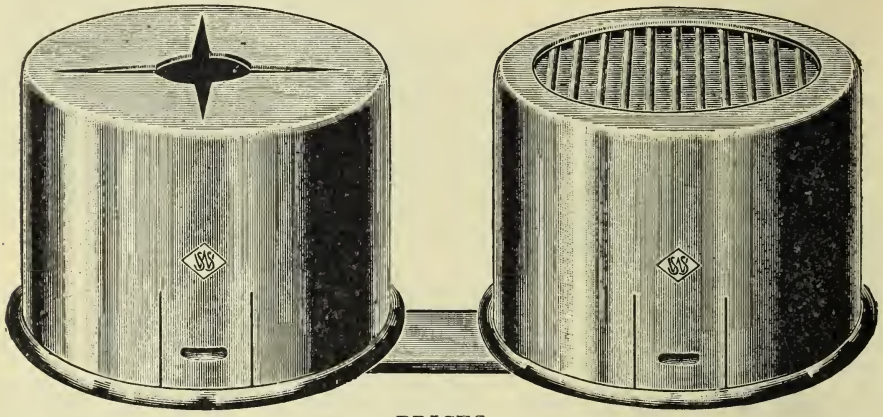
Absorbent Cotton in Aseptic Container.

Price, container filled ..... each, $0.30

Parker's Paper Fibre Lint.

Price, half-pound boxes ..... per box, $0.50

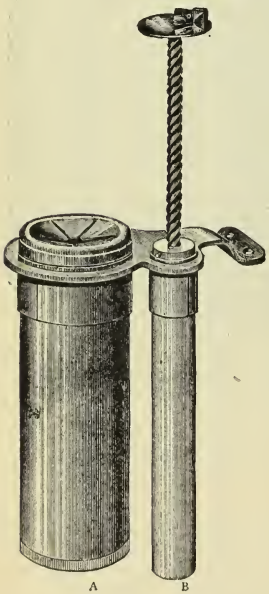
Cotton-Holders and Waste Receivers.



PRICES.

Cotton-Holder, separately.....$1.00
Waste-Receiver, separately..... 1.25
Complete, as illustrated..... 2.50

Waste Cotton-Holder and Robert's Cotton Pellet Roller.



This is a very smooth little device. It makes a better cotton pellet than can be made any other way. It ought almost to be called a self-roller.

A wisp of loose cotton is held in the pliers, the pliers pressed against the disk and the pellet is formed.

To be thoroughly appreciated, the device should be seen in actual operation.

The waste cotton holder is a glass bottle in nickel-plated case.

PRICES.

Roberts' Cotton Pellet Roller, B..... $1.25
Waste Cotton Holder, A..... 1.75
Roberts' Cotton Pellet Roller and Waste Cotton Holder..... 3.00

Dr. G. B. Richmond's Cotton Dental Pellets.

These Pellets are made in four sizes, and of the finest absorbent cotton. They will be found a great convenience to the operator, saving the time required to prepare pellets in the usual way.

Put up in packages containing the four sizes, assorted.
Price, boxes containing 8,000 to 10,000 Pellets....each $0.25
Price, boxes containing about 5,000 Pellets.....each .15

Absorbent Paper Tampons.

A sort of almond-shaped, flattened roll of Japanese Bibulous paper, convenient for handling with the plug-pliers. Specially adapted for drying caps, roots and crowns for cementation in crown and bridge work.

Three sizes, 1,000 assorted in a light wooden box.
Price ..... per box, $0.60

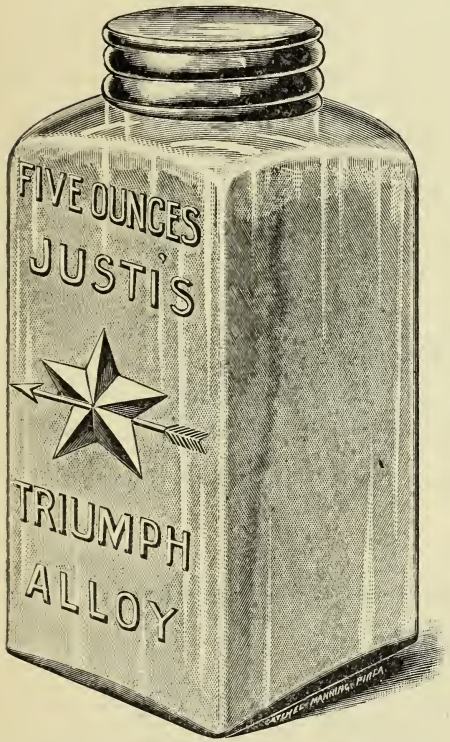
"Salivoids."

A Compressed Cotton Saliva Pad for stopping the salivary ducts.

Put up 4 dozen in box
2 dozen large; 2 dozen small
Price ..... per box, $0.60

TRIUMPH ALLOY.

H. D. Justi & Son, Philadelphia and Chicago.



It is with pleasure that we offer to the dental profession *Triumph Alloy.* In this, as in all other materials manufactured by us, our effort is to produce for the dental profession goods which are strictly high class, and which will justify you in the continuance of their use after once being adopted in your practice. The precision and care exercised in the manufacture of Triumph Alloy warrants us in going further in our claims than becomes many other manufacturers, as every batch of material made is subjected to the most thorough tests with those delicate and accurate physical instruments, which we possess for this purpose.

The tests to which we claim an alloy should be subjected before being offered to the profession is, that there should not be the slightest possible shrinkage, but a slight expansion, and that not to exceed one point, or $\frac{1}{10000}$ of an inch as measured by the micrometer. The second effort should be to attain the greatest possible strength, and in *Triumph* we can declare that the Alloy will show a crushing strength of never less than 400, and even as high as 450 pounds.

Triumph is also an annealed Alloy, which is a guarantee against any possible change. As it leaves our factory, so it remains, and the results will be the same whether used immediately upon its receipt, or its use is postponed to future years. The combination of metals is such that it will retain a beautiful silvery white color.

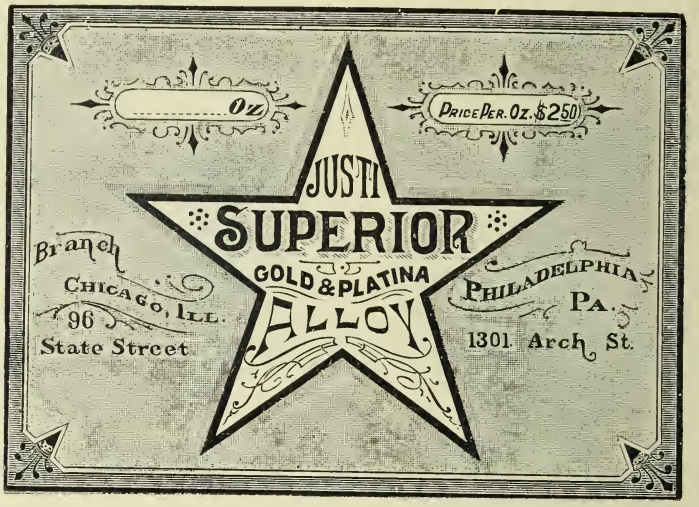
We believe it to be perfect, and unhesitatingly invite comparison with any alloy on the market.

Directions. The proportion in a mix should be 7 of mercury to 5 of alloy. Always start the mix in a mortar, afterwards kneading thoroughly in the palm of the hand, then expressing the excess of mercury by gently wringing the mass in a piece of drilling or a doily. *Triumph Alloy* is naturally a rapid crystallizer through the high percentage of silver it contains, so that it is necessary that the cavities be prepared before making the mix, and not to mix for more than two cavities at a time. Cut your mass in pieces the required size for introduction into the cavities and pack with as large (finely serrated) instruments as possible, using as much pressure as is consistent with the operation. In contour work a matrix should always be used. You will note that a filling can be polished within a few minutes after its completion.

Triumph Alloy is put up and sold only in original packages:

One-half ounce	$ 1.50
One ounce	3.00
Two ounces	5.50
Five ounces	12.50
Ten ounces	22.50
Twenty ounces	40.00

Justi's Gold and Platinum Alloy.



For Durability, Density and Making Strong Edges it is Unexcelled.

Justi's White Alloy.

This Alloy is of fine grain, makes a very hard filling capable of high finish, which, with its light grayish color it has perfectly retained under the many tests to which it has been subjected.

Price, Justi's Gold and Platinum Alloy, per	1 oz	$ 2 50
" " " "	2 oz	4 50
" " " "	5 oz	10 00
" " " "	10 oz	19 00
" " " "	20 oz	30 00
" Justi's White Alloy,	1 oz	3 50
" " "	2 oz	6 00
" " "	4 oz	11 00
" " "	10 oz	24 00
" " "	20 oz	38 00

Welch's Gold and Platina Alloy

Is so well known, and so generally in use that farther advertisement seems hardly necessary. But, of course, new men are constantly coming into the profession, and all are anxious to use the best. Its expensive materials will not allow me to compete with many in use, but a proof of its superior quality is certainly in the fact of its being used by so many of our best dentists.

My amalgam, too, is a staple article, and is thought by some to be equal to my G. P. Alloy.

I was the first to bring out the cement I then named Oxiphosphate, and it has well stood the test of time.

PRICE TO DENTISTS.

Welch's Alloy .... 1 oz., $3.00; 2 ozs., $5.50; 4 ozs., $10.00; 10 ozs., $22.50.
Welch's Amalgam 1 oz., $2.00; 2 ozs., $3.75; 4 ozs., $ 7.00; 10 ozs., $15.00.
Welch's Oxiphosphate, large, $1.50; medium, $1.00.
Liquids or Powders, large, 75 cents; medium, 50 cents.

Address,
DR. T. B. WELCH,
Philadelphia, Station W.

"REGO" ALLOY.

Every ounce of this Alloy is rigidly tested in our Laboratory, and must conform to this requirement:

Shrinkage, 0.

Expansion not exceeding $\frac{1}{10000}$ of an inch.

Our method of making insures the permanency of this standard.

With proper manipulation this Alloy makes a perfectly tight, microbe-proof filling, of great strength and of a beautiful silvery white color.

Permanency is not a *visible* quality in Alloy, else few Alloys sold to-day would find purchasers. New methods, new processes and advanced knowledge of the physical properties of metals enable us to insure in "Rego" Alloy a filling material that for uniformity of highest desirable qualities has not hitherto been approached in any large way.

Although a graduate metallurgist with eighteen years' experience in our laboratory, devoting all his time to dental materials, our representative took a special Manufacturers' Post-Graduate Course, given by Dr. Greene V. Black, D.D.S., Sc.D., LL.D., Dean of the Northwestern University Dental School.

We were thus enabled to avail ourselves of the results and conclusions of this world-wide recognized expert, who has for more than forty years, with infinite labor and tireless patience, experimented along entirely original lines with Amalgams and Amalgam making. In "Rego" Alloy, therefore, we offer you an Alloy made in strict conformity with Dr. Black's views and standing all his tests.

NORTHWESTERN UNIVERSITY DENTAL SCHOOL
AMERICAN COLLEGE OF DENTAL SURGERY
CONSOLIDATED WITH THIS SCHOOL
CORNER MADISON AND FRANKLIN STREETS
G. V. BLACK, M. D., D. D. S., Sc D., LL. D., Dean
FOR ANY INFORMATION ADDRESS
THEO. MENGES, D. D. S., Secretary.

CHICAGO, ILL., January 12, 1900.

"MR GIDEON SIBLEY,

"*Dear Sir:* Please send by bearer 100 ounces 'Rego' Alloy. 'Rego' has successfully stood every scientific test, and proves eminently satisfactory clinically. It is gratifying to us to know that Dr. Black's students have succeeded so well in the mastery of the principles, complicated as they are, involved in the manufacture of a stable Alloy.

Respectfully yours,
THEO. MENGES, *Secretary.*

Having used 300 ounces of "Rego" Alloy prior to placing the above order, it might be safely inferred, even in the absence of above expression of their satisfaction, that this Alloy is all right. Alloy as a filling, once so full of uncertainty, and so limited in its successful results, is now with "Rego" Alloy so certain that success can always be depended upon where an Amalgam filling is required.

Put up only in 1 and 5-ounce bottles, inclosed in neat boxes.

Prices: 1 ounce, $3.00; 5 ounces, $12.50; 10 ounces, $22.50; 20 ounces, $40.00.

The Standard Dental Alloy

From a small beginning, based on a course of scientific experiment, grows steadily into favor on three continents.

Fine Grain
Rapid Solidification
Homogeneous.
Specially adapted for
Building
and Pivoting.

PRICE.

Per ounce	$6.00
Per half-ounce	3.00

QUANTITY RATES TO DENTISTS.

Three ounces	per ounce,	$5.50
Five to nine ounces	"	5.00
Ten ounces and over	"	4.75

ECKFELDT & DuBOIS, P. O. Box 995, Philadelphia, Pa.

"THE OLD RELIABLE."

LAWRENCE'S AMALGAM.

RES NON VERBA
A. L. LAWRENCE
TRADE MARK

This AMALGAM has received the endorsement of the Dental Profession to a large for over forty-four years which would seem to render any remarks as to its excellence superfluous. BEWARE OF FRAUDULENT IMITATIONS, whether from so called analysis or otherwise, and remember that Lawrence's Amalgam is always put up in a white lithographed envelope, covering a brown one containing the Amalgam, with Trade Mark on the lap of each, and both copyrighted.

THE S. S. WHITE DENTAL MANUFACTURING CO., Chestnut St., Cor. 12th St., Philadelphia, Pa., is sole Agent, and all communications from the TRADE should be addressed accordingly.

Prices, 1 oz. $3.00: 2 oz. $5.50; 4 oz. $10.00;. In 1 oz. and 1-2 oz. Packages.

Manufactured only by
AMBROSE LAWRENCE, M. D., 109 St. Botolph St., Boston, Mass.

In addition to above and other alloys listed in our catalogue we also carry in stock the following:

Globe Alloy	per oz. $2.00	Splendid Alloy	per oz. $1.50
True Dentalloy	" 1.50	Arrington's	" 1.50
Alba Alloy	" 1.50	Townsend's	" 1.50

Alloys Manufactured by Gideon Sibley.

Dawson's White Alloy.

Made from Dr. O. B. Dawson's original formula, and has met with a continuous demand for near a quarter century. Our superior manufacturing facilities render it certain that this alloy was never better, than it is to-day, if as good.

	1-oz.	2-oz.	5-oz.	10-oz,	20-oz.
Prices,	$4.00	$7.50	$17.00	$32.50	$30.00

Sibley's White Alloy.

One of the very whitest Alloys made and has great edge strength; mixing more readily and setting less quickly than Rego Alloy as it does, some prefer it on this account.

	1-oz.	2-oz.	5-oz.	10-oz.	20-oz.
Prices,	$2.50	$4.75	$11.00	$20.00	$30.00

Sibley's Gold and Platinum Alloy.

This Alloy will be appreciated by those who like Gold and Platinum in their Amalgam. It makes a dense plug with excellent edge strength and good color.

	1-oz.	2-oz.	5 oz,	10-oz.	20-oz.
Prices,	$2.50	$4.75	$11.00	$20.00	$30.00

Sibley's New Amalgam.

In a very low-priced Amalgam we do not believe this is excelled. It mixes very easily and sets slowly. You may pay much more, in fact, and have less worthy fillings.

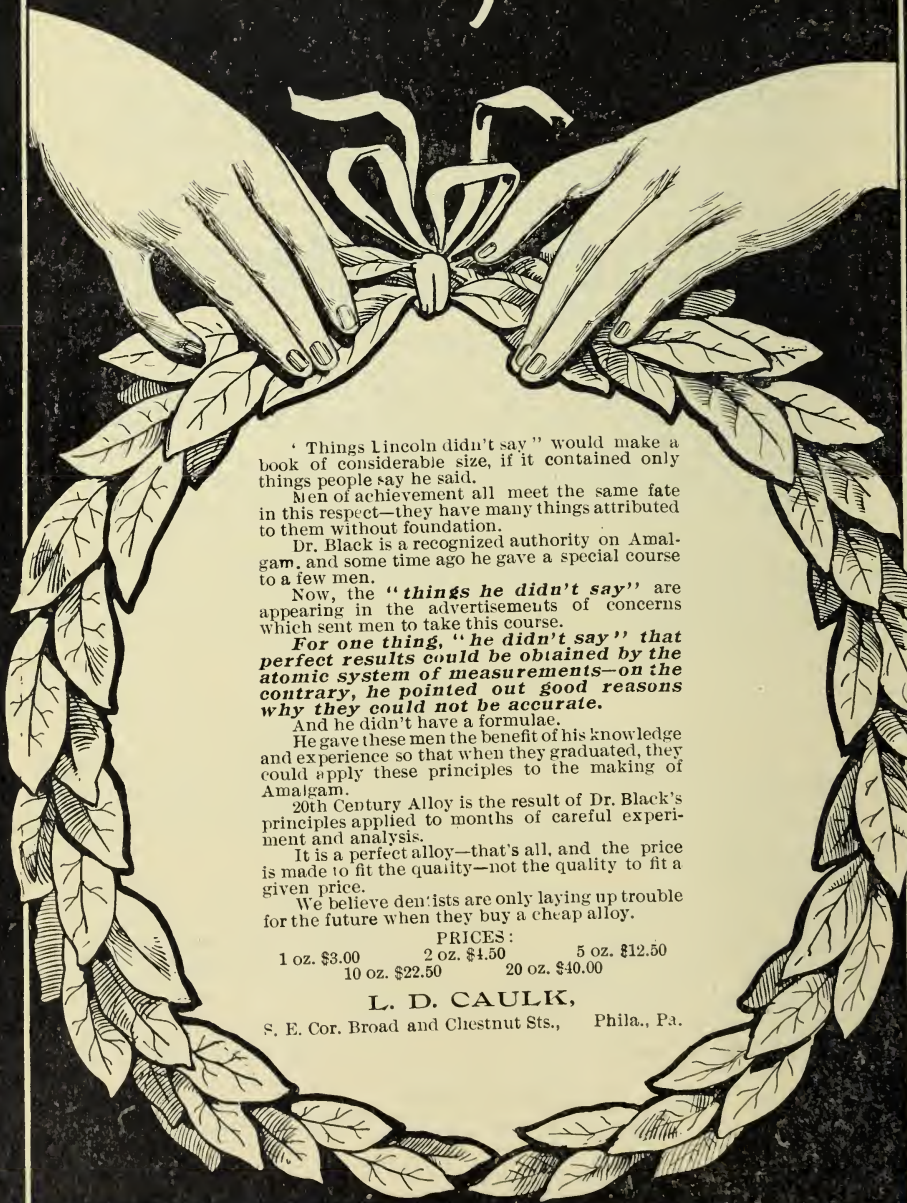
	1-oz.	5-oz.	10-oz.	20-oz.
Prices,	$1.50	$6.75	$12.00	$20.00

Plastic Fillings.

Prepared and Tested by Thos. Fletcher, F. C. S., Warrington, Eng.

Platinum and Gold Alloy	per oz. $4.80
White Enamel, Oxchloride of Zinc	per pkt. 1.50
Artificial Dentine, Oxsulphate of Zinc	per pkt. 1.00

20th CENTURY ALLOY
A Perfect Alloy-Thats All!



"Things Lincoln didn't say" would make a book of considerable size, if it contained only things people say he said.

Men of achievement all meet the same fate in this respect—they have many things attributed to them without foundation.

Dr. Black is a recognized authority on Amalgam, and some time ago he gave a special course to a few men.

Now, the ***"things he didn't say"*** are appearing in the advertisements of concerns which sent men to take this course.

For one thing, "he didn't say" that perfect results could be obtained by the atomic system of measurements—on the contrary, he pointed out good reasons why they could not be accurate.

And he didn't have a formulae.

He gave these men the benefit of his knowledge and experience so that when they graduated, they could apply these principles to the making of Amalgam.

20th Century Alloy is the result of Dr. Black's principles applied to months of careful experiment and analysis.

It is a perfect alloy—that's all, and the price is made to fit the quality—not the quality to fit a given price.

We believe dentists are only laying up trouble for the future when they buy a cheap alloy.

PRICES:

1 oz. $3.00 2 oz. $4.50 5 oz. $12.50
10 oz. $22.50 20 oz. $40.00

L. D. CAULK,

S. E. Cor. Broad and Chestnut Sts., Phila., Pa.

Do you Keep a Record of your Alloy Fillings? Do you Use

Par Excellence Alloy?

Supposing that you do, we ask that you refer to them at every opportunity and learn if this alloy has proven the tooth saver that we have claimed for it these past twenty-four years.

We court and never fear either an investigation or comparison.

Par Excellence Alloy (as a plastic) stands to-day without a peer.

It is easy of manipulation. Its color is right, and its strength the highest attainable.

Handled by all dealers and sold by them with the satisfaction that it universally pleases their patrons.

Order an ounce. Try it. Keep a close watch and record of it, is all that we ask to insure for it a place always in your practice.

L. D. CAULK,

Broad and Chestnut Streets,

Philadelphia, Pa., U. S. A.

The Dental Profession

are always looking for a WHITE ALLOY, which they term a "Front Tooth Alloy."

No alloy made can properly be called a "Front Tooth Alloy," yet we offer you one, the whitest that is made, or offered to the Profession. And for bi-cuspids or cavities in the anterior teeth not exposed to view, it has no rival. It is white, and will remain so. It will not discolor the tooth, as it contains no cadmium or other injurious metals. It has most excellent edge strength.

This Alloy is known and sold as CAULK'S WHITE ALLOY.

The reputation it has is that no alloy made retains its color as it does. Sold Everywhere.

PRICE

One oz. $3.50	**Four oz. $11.00**
Two oz. 6.00	**Ten oz. 24.00**

Caulk's Superior Amalgam

Is made from a formula which produces a better material than many Amalgams sold every day for more than the price we ask for this Superior Amalgam. It is a low-priced Amalgam, made of good material, and worth its price. Price, $1.50 per ounce, in any quantity.

Townsend's Amalgam

Plain, every-day, old-time Amalgam, used by a great many dentists particularly on account of its price. Everybody knows the formula of this Amalgam, and that it is a tooth saver on account of the copper it contains. Our long and extensive experience as manufacturers of alloys, enables us to make Townsend's Amalgam as good as Townsend's Amalgam can be made. Price, $1.50 per ounce, in any quantity.

L. D. CAULK,

Broad and Chestnut Streets,
Philadelphia, Pa., U. S. A.

Gutta-Percha as a Permanent Filling Material

The preparation of Gutta-Percha, especially for dental use, requires great skill and a thorough acquaintance with the material. Especially is this true when using Gutta-Perchas as a permanent filling material. It is necessary to heat the material to a plastic consistency, always using a gutta-percha heater, and our three grades, 6½, 7½ and 8½, become plastic at the following temperatures: 190°, 212°, 220° Fahr. It is well to remember that these numbers correspond with the temperatures, the lower the number the lower the temperature required at which it works with best results. In Cylinders and Pellets, put up in ¼ and ½ oz. packages. $2.00 per ounce.

Caulk's Temporary Stopping

in appearance, resembles others, but in quality it surpasses all

A material of this sort is an absolute necessity for retaining medicaments in teeth to be treated, and for the slow, painless separation between the bi-cuspids and molars, it will be found valuable.

Fill up the space and allow mastication to effect the separation.

OUR CLAIMS ARE that this stopping will remain in its place until the dentist removes it.

It will not be washed out of the cavity by a hot drink.

It will soften at a low temperature.

It will harden quickly.

It is cohesive without sticking to the instruments during manipulation.

Price, 50 cents per box. Pink, White, or Assorted.

Caulk's Gutta-Percha Points

FOR FILLING ROOT CANALS

These Points are made of the highest grade of Gutta-Percha, are hand rolled, put up 150 in a box, in two colors, Pink and White, or Assorted.

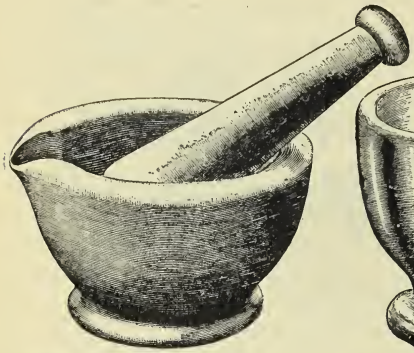
Price, 30 cents per box.

L. D. CAULK,

Broad and Chestnut Streets,

Philadelphia, Pa., U. S. A.

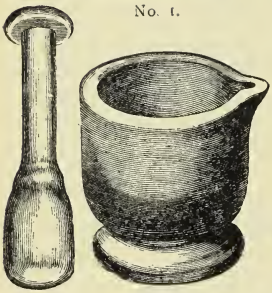
Mortars and Pestles.



No. 1.

No. 2.

No. 3.



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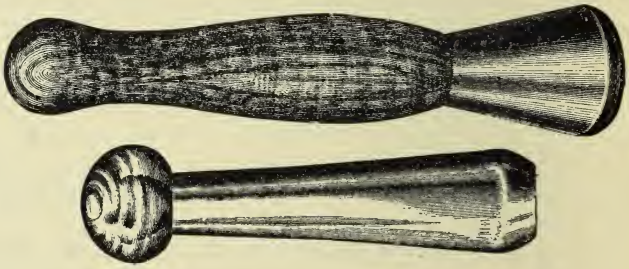
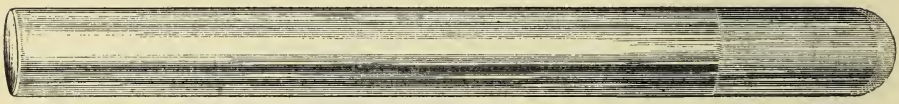
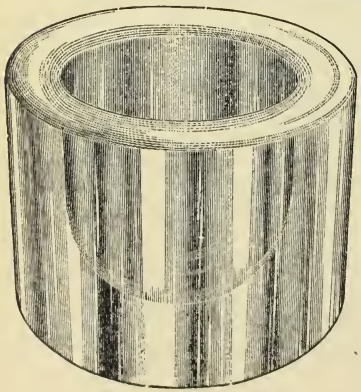


No. 1.	Wedgewood mortar and pestle.....each	$0.35
No. 2.	Flint glass, inner surface ground, pestle has wooden handles.....	.75
No. 3.	Flint glass mortar and pestle; mortar ground inside.....	.50
No. 4.	Opaque glass for mixing small quantities of amalgam.....	.20

No. 5 Glass Mortars and Pestle.

Made by Buffalo Dental Mfg. Co.





No. 5.

These are the genuine Fletcher Mortar, made of glass, ground inside and on end of pestle. Size, 1¾ inches outside diameter, 1½ inches high. Pestle for firm holding, 4½ inches long.

Fletcher's Mortar and Pestle.....$0.50

ST PAUL, MINN. MINNEAPOLIS, MINN. MILWAUKEE, WIS. DES MOINES, IA.

THIS ALLOY is the product of years of study and experimenting by one of the best posted men in the profession. It contains nothing but Gold, Platinum, Silver and Tin, of the best quality to be obtained, and is made with the utmost care.

It has been on the market over seven years, and the demand has steadily increased, until we have been forced to increase our capacity for making it.

It possesses peculiar qualities of hardness and edge strength, and holds its color as well as an Alloy can be made to, which contains no injurious substances.

It works very plastic; but may be worked very dry, with the best results.

All known experimental tests fail to show any change when finally set, and the testimony of hundreds of men shows that in actual use it has no equal.

Put up in envelopes, containing ½ and 1 ounce, either coarse or fine shavings, and in 5 ounce glass screw-top bottles.

PRICES:

Per ounce	$ 3 00
" 2 ounces	5 00
" 5 "	10 00
" 10 "	19 00
" 20 "	30 00

PATTERSON'S PHOENIX GOLD AND PLATINA ALLOY.

This Alloy is prepared by a new method, and several years of use have established the fact that it is one of the best Alloys on the market. Its color and edge strength are the very best.

Put up in ½ and 1 ounce packages.

PRICES.

Per ounce	$ 3.00
Per 2 ounce	5.00
Per 5 "	10.00
Per 10 "	18.00
Per 20 "	30.00

TWIN CITY GOLD ALLOY.

This is an alloy which retains its color especially well, without losing any of the properties so essential to a good Alloy.

PRICES.

Per ounce	$ 1.50
Per 5 ounce	6.00
Per 10 "	10.00
Per 20 "	18.00

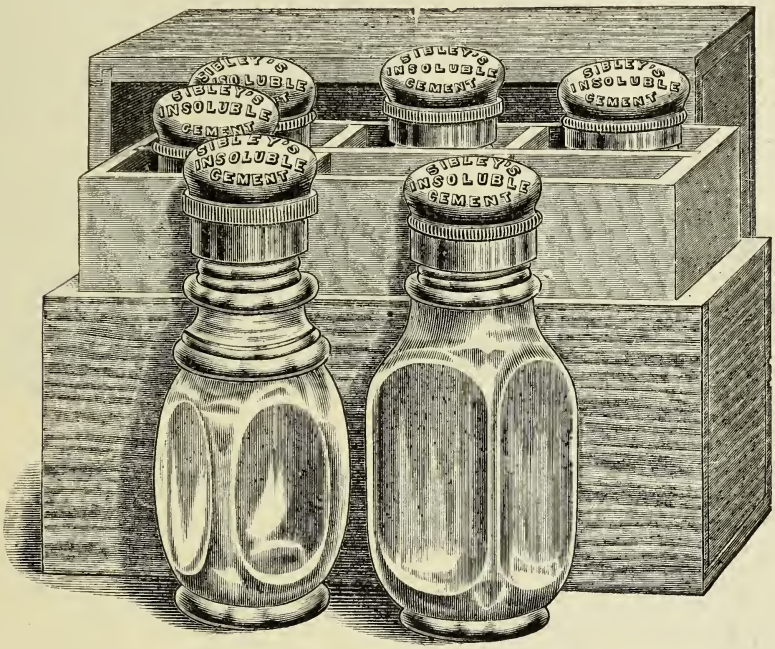
NUGGET AMALGAM.

This Alloy contains a high percentage of Silver, with Tin and Gold, and is very popular with some dentists.

PRICES.

Per ounce	$1.50
Per 4 "	5.00

"Sibley's" Insoluble Cement.



This CEMENT has stood the practical test of three years' use, and if the testimony of careful practitioners, coupled with the immense sales made of it to-day, is any indication of merit, it must claim a very high position among cements for permanent fillings.

IT IS UNIFORM IN ITS WORKING AND WEARING QUALITIES,
DOES NOT DETERIORATE WITH AGE.
FLUID WILL NOT CLOUD OR CRYSTALLIZE.
WORKS IN ANY TEMPERATURE.

For permanent filling or attaching crowns or bridge-work, we do not believe it is equaled. Its extreme density, which is almost flint-like, together with its insoluble character, stamp it as superior for the work indicated.

This CEMENT mixes easily and smoothly, remaining plastic long enough to give ample time for manipulating. It is so thoroughly adhesive that after setting, the filling and tooth structure become practically one, effectively keeping out all mouth secretions and thereby preventing further decay.

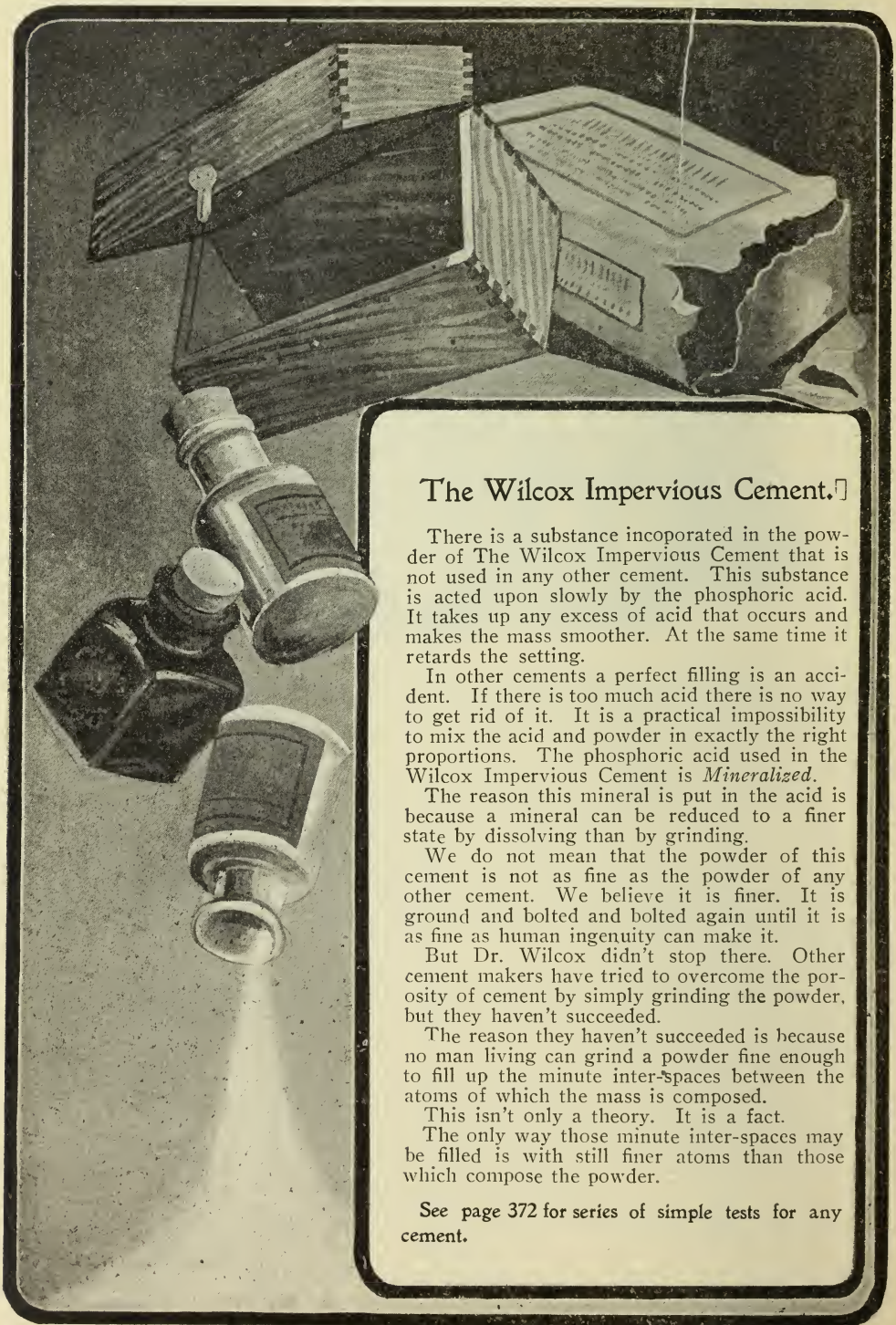
In offering you this CEMENT we have the courage of conviction. *We guarantee every box of it;* if, therefore, it is not found as good as we promise, or as you think it should be, bring or send it back; we'll exchange it for any other you may select at equal price. *You* run no risk in the trial.

MADE IN FOUR COLORS.

No. 1, light; No. 2, medium; No. 3, yellow; No. 4, blue

PRICES.

1 color, $1.50; 2 colors, $2.00; 4 colors, $3.00



The Wilcox Impervious Cement.

There is a substance incoporated in the powder of The Wilcox Impervious Cement that is not used in any other cement. This substance is acted upon slowly by the phosphoric acid. It takes up any excess of acid that occurs and makes the mass smoother. At the same time it retards the setting.

In other cements a perfect filling is an accident. If there is too much acid there is no way to get rid of it. It is a practical impossibility to mix the acid and powder in exactly the right proportions. The phosphoric acid used in the Wilcox Impervious Cement is *Mineralized*.

The reason this mineral is put in the acid is because a mineral can be reduced to a finer state by dissolving than by grinding.

We do not mean that the powder of this cement is not as fine as the powder of any other cement. We believe it is finer. It is ground and bolted and bolted again until it is as fine as human ingenuity can make it.

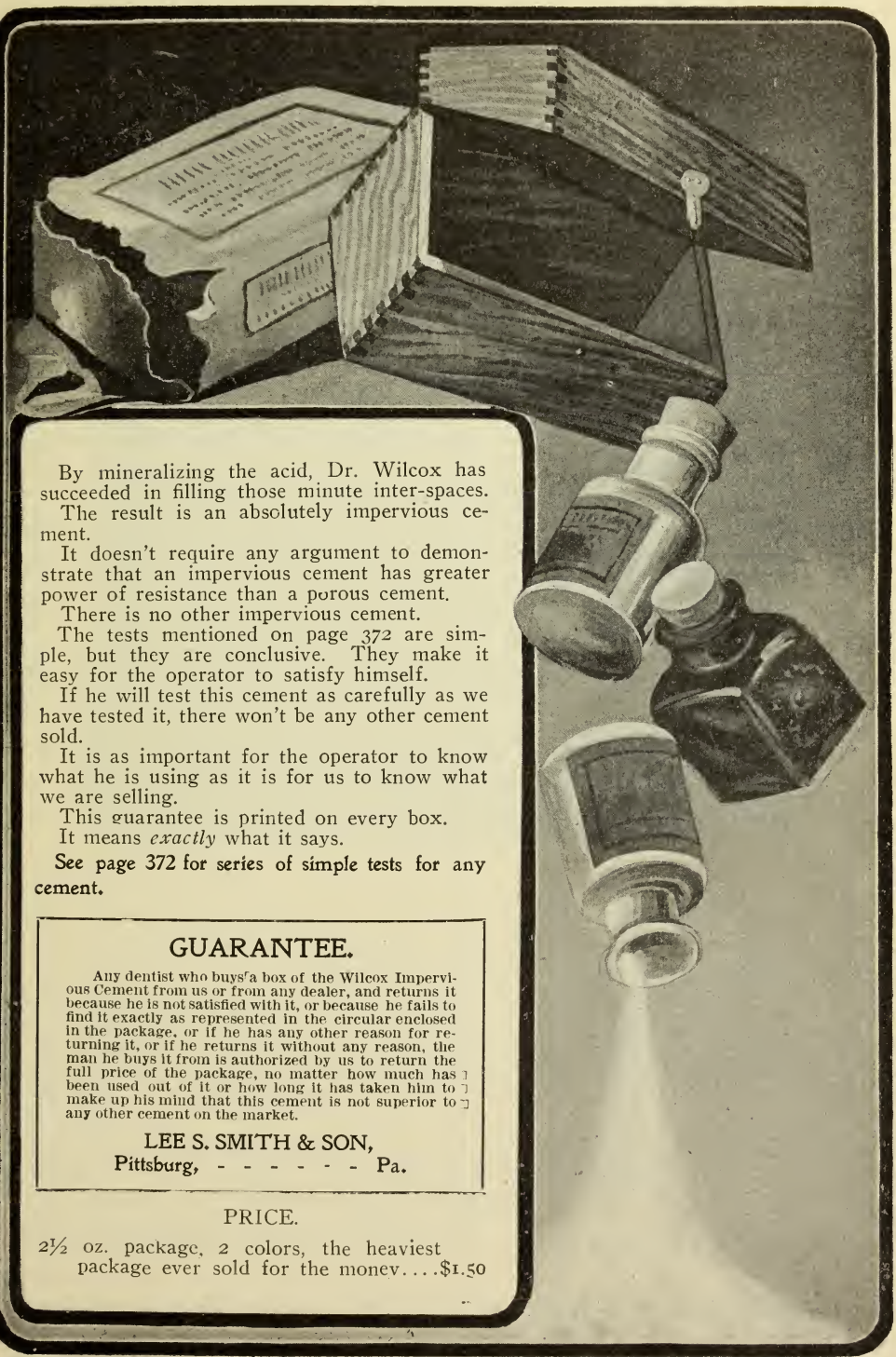
But Dr. Wilcox didn't stop there. Other cement makers have tried to overcome the porosity of cement by simply grinding the powder, but they haven't succeeded.

The reason they haven't succeeded is because no man living can grind a powder fine enough to fill up the minute inter-spaces between the atoms of which the mass is composed.

This isn't only a theory. It is a fact.

The only way those minute inter-spaces may be filled is with still finer atoms than those which compose the powder.

See page 372 for series of simple tests for any cement.



By mineralizing the acid, Dr. Wilcox has succeeded in filling those minute inter-spaces.

The result is an absolutely impervious cement.

It doesn't require any argument to demonstrate that an impervious cement has greater power of resistance than a porous cement.

There is no other impervious cement.

The tests mentioned on page 372 are simple, but they are conclusive. They make it easy for the operator to satisfy himself.

If he will test this cement as carefully as we have tested it, there won't be any other cement sold.

It is as important for the operator to know what he is using as it is for us to know what we are selling.

This guarantee is printed on every box.

It means *exactly* what it says.

See page 372 for series of simple tests for any cement.

GUARANTEE.

Any dentist who buys a box of the Wilcox Impervious Cement from us or from any dealer, and returns it because he is not satisfied with it, or because he fails to find it exactly as represented in the circular enclosed in the package, or if he has any other reason for returning it, or if he returns it without any reason, the man he buys it from is authorized by us to return the full price of the package, no matter how much has been used out of it or how long it has taken him to make up his mind that this cement is not superior to any other cement on the market.

LEE S. SMITH & SON,
Pittsburg, - - - - - - Pa.

PRICE.

2½ oz. package, 2 colors, the heaviest package ever sold for the money....$1.50

Simple Tests for Cement.

This is a series of tests any dentist can make for himself. If a dentist would test cements for himself he wouldn't have to spend so much time reading about what they will do. The best cement for him to use is the cement that will stand all of these tests better than any other.

The operator is the man who uses the cement. He is the man to test it.

IMPERVIOUSNESS.—Drop a pellet in *Red Ink*. If it stains to the center it is not fit for use—the fluids of the mouth will also penetrate it. This is the reason why crowns set with ordinary cement have an offensive odor. From a sanitary point of view, aside from its durability, it is preferable to use an impervious cement.

HARDNESS.—Strike a hard pellet with a hammer. It should not crumble like sand-stone, but break in sharp fractures like marble. Rolled in the form of a long pellet it should require considerable force to break it.

EXPANSION OR SHRINKAGE.—Pack a thin drachm vial half full of cement, mixed as for bridge-work. Fill with red ink. If the vial cracks the cement has expanded. If the ink runs between the glass and the plug, it has contracted and fillings made with it will leak.

DENSITY.—Examine with a magnifying glass. It should show no porosity..

ADHESIVENESS.—It should stick tenaciously to the walls of the cavity, root or crown.

SLOW-SETTING.—That ample time may be had, either for filling or placing a bridge.

KNEADED IN THE FINGERS.—It should not crumble.

The Wilcox Carbolized Non-Irritant Cement for Lining Deep Seated Cavities.

The use of this cement is indicated in all cases here proximity to the dental pulp might cause its irritation and ultimate destruction if ordinary cement were used. It is especially adapted for the lining of cavities before filling with gold or amalgam.

DIRECTIONS.—Mix to the consistency of thick cream, and flow into the cavity. This cement sets too quickly to be successfully used either for crown setting or permanent fillings.

Price ..... per package, $1.25

LEE S. SMITH & SON, Sole Agents,

Pittsburg, - - Pa.

BRITTON'S VITRIFIED CEMENT.

THIS CUT EXACT SIZE OF PACKAGE.

WEIGHT OF PACKAGES, 10 OUNCES.

This is an old standard cement which we can heartily recommend.

It is manufactured by an expert chemist, who has devoted himself for years to the producing of dental cements, and he is confident that no cement yet produced is so well adapted to all dental purposes.

Do not be deceived by absurd claims and foolish tests. The most worthless of cements, composed of desicated epsom salts and the syrupy phosphoric acid of the drug stores will withstand some of the most important tests better than the best cements made, yet it is soluble in water.

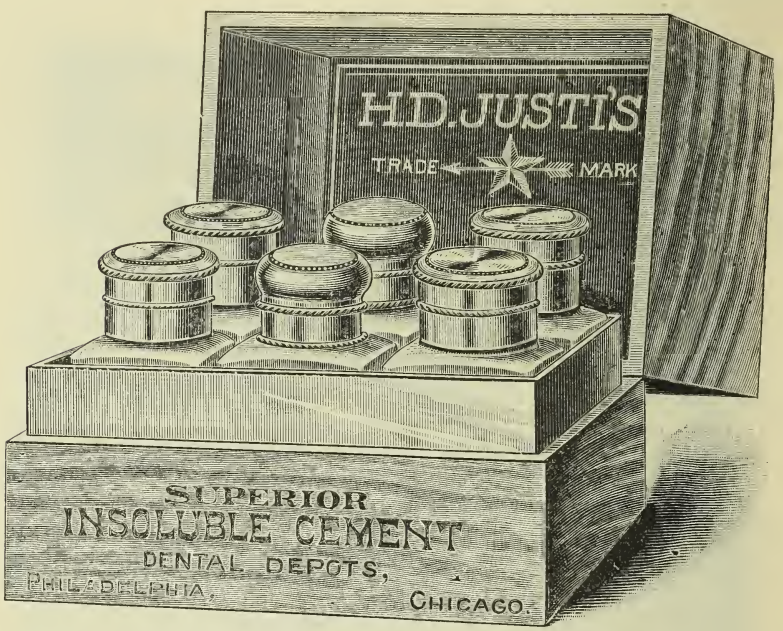
Oxycloride of zinc is much more *impervious* than oxyphosphate, yet which is the most permanent?

You cannot afford to experiment with your practice, but use Britton's VITRIFIED CEMENT, with the assurance that it is the best obtainable.

Every package is guaranteed, and will be cheerfully exchanged upon request, without question.

Price ....$1.50 Separate bottles.....$0.50

H. D. Justi & Son's Superior Insoluble Cement.



FACTS ABOUT CEMENT.

No dentist ever got good results when he did things wrong.

No dentist will be satisfied with Justi's Insoluble Cement if he neglects to mix it right.

But the dentist who mixes the powder and liquid like the directions say, will find Justi's Insoluble Cement really, actually, absolutely insoluble.

He will find it becoming harder as time passes.

He will find that old fillings can be removed by using the hardest tempered and sharpest instruments.

He will find the hardening so rapid that it is unnecessary to remove the rubber dam before finishing.

It is the best that money will purchase. That's the whole story.

Made in 4 colors: No. 1 white, No. 2 cream, No. 3 yellow, No. 4 bluish gray.

Send orders to any dental depot or to us direct.

PRICES:

1-oz. Box, 4 colors and 2 bottles Liquid	$3.00
½-oz. Box, 1 color and 1 bottle Liquid	1.50
½-oz. Box, 2 colors and 1 bottle Liquid	1.50

H. D. Justi & Son.

C. A. & S. Cement (Oxyphosphate of Zinc.)

Made by C. Ash & Sons, Ltd.

Noted for the Following Qualities:

Easy working; extraordinary hardness; great power of resistance to the acids of the mouth; freedom from shrinkage and expansion; complete adhesion to the walls of the cavity.

Prepared in six shades: White, Pale Yellow, Yellow, Pearl Gray, Gray, and Brown.

PRICES.

Box containing one bottle Liquid and 30 grammes Powder	per box	$1.50
Separately Powder	per bottle	.75
Liquid	per bottle	.75
Box containing large bottle Liquid and 50 grammes Powder	per box	2.50
Separately Powder	per bottle	1.50
Liquid	per bottle	1.00
Box containing two bottles Liquid and four 10-gramme bottles Powder—White, Pale Yellow, Yellow, Pearl Gray	per box	2.50
Separately Powder	per bottle	.60
Liquid	per bottle	.30

Directions for use enclosed in each box.

Note.—The liquid never becomes turbid, no matter whether the bottle is left open or corked; it is, however, advisable to keep it corked when not in use.

Sample packet sent free on application.

Eisfelder's Cement.

C. Ash & Sons, Ltd., Sole Agents U. S. A.

In original metal boxes, containing 4 large Powder and 4 Liquid	$9.00
In metal boxes, 1 Powder and Liquid	2.50

H. D. Justi & Son's Acme Cement.

OXY-CHLORIDE.

It is manufactured under our personal supervision, and we can guarantee its uniformity in quality and its durability, it is free from all such substances that produce but a temporary hardening, readily destroyed by the secretions of the mouth. It combines all the cardinal properties a cement should possess, does its work unerring, complete, and is lasting.

We also claim originality in the bottles; the stopper, formed in the shape of a bowl, is intended for the manipulation of the cement, and for carrying the same to the mouth; this is very convenient for the operator.

Furnished in two colors—No. 1, a soft medium yellow; No. 2, a soft medium gray. These the most particular operator will find sufficient for the various cases presenting themselves.

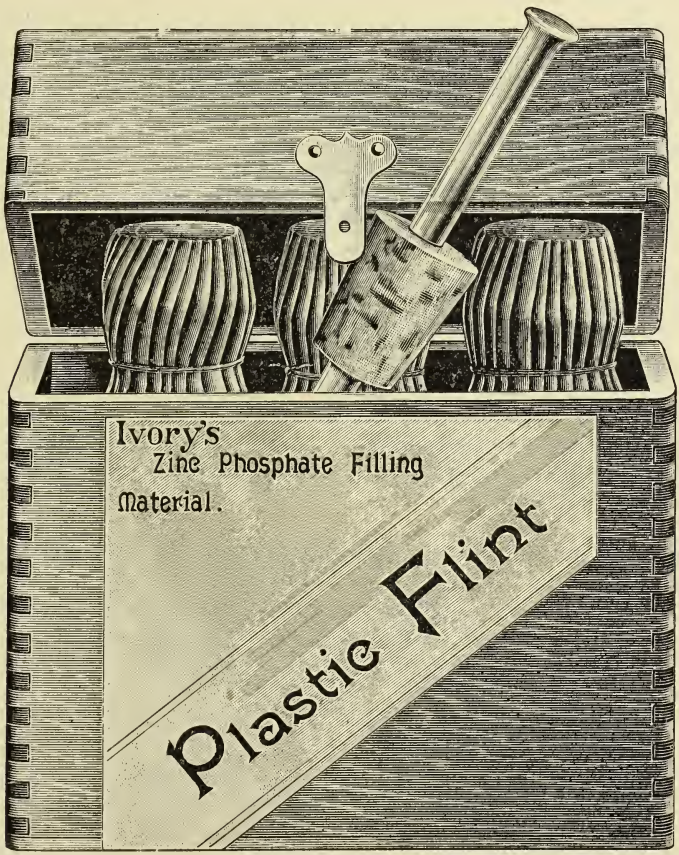
Price, per box.....$1.00

Plastic Flint Cement.

A Zinc Phosphate Cement made in two shades—gray and yellow, the zinc oxide being perfectly vitrified, and breaking with a fracture like that of fine porcelain. The fluid, a limpid solution of Glacial Phosphoric Acid, which neither crystallizes nor clouds. Always reliable. *Never deteriorates before use;* a package five years old working as well as one made but a day. No other Zinc Phosphate can sustain this claim.

For Bridge and Crown Work

"Plastic Flint" is absolutely without a peer, and for packing joints in gum block work (Prosthetic) first-class results are always attained where proper care is observed. A large piece of asbestos cloth for non-conductor capping accompanies each package, together with full directions for use.



Put up in neat Oak Boxes containing 3 ounces of powder and sufficient quantity of fluid.

Price, per package $1.50

WHAT IS SAID OF IT.

Dr. William H. Trueman, whose contribution to the "American System of Dentistry," and whose active work and practical writings have made his name familiar to dentists in all parts of the civilized world, writes after five years' trial of PLASTIC FLINT:

* * * Have been well satisfied with your "PLASTIC FLINT." It works kindly, and in durability it fully equals any that I have ever used. WILLIAM H. TRUEMAN.

Dr. Alex. P. Long, Demonstrator of Operative Dentistry at the Pennsylvania Dental College, after a practical test of PLASTIC FLINT, dating almost from its discovery, writes:

* * * Having long used your preparation of Zinc Phosphate, known as "PLASTIC FLINT," it gives me pleasure to testify to its merits. The fact that it does not deteriorate before use, and its almirable results in the mouth, stamp it as a superior article, and I use it in preference to any other. Yours truly, ALEX. P. LONG, D.D.S.

Schallenmuller's Formol Cement.

Improved Formageno

is a superior preparation for painless treatment, and preserving diseased pulps in every stage, for capping amputated pulps, and for filling roots.

Painful and irritated pulps can be capped and the cavity filled at one sitting. The application of this improved Formageno Cement is the easiest and surest, because it neither adheres to the instrument nor crumbles.

DIRECTIONS FOR USE.

The cavity of the tooth to be filled must be carefully excavated with spoon-shaped excavators, a thin layer of soft dentine may exceptionally be left on the pulp. Before capping, pulps should be saturated with the fluid, for at least five minutes; irritated or inflamed pulps must be first healed by one or several dressings of the fluid in order to reduce them to their normal state before they can be capped. To prevent pain a dressing of Carbolic Acid 50 per cent. may be used for some minutes.

The pulp and the largest part of the cavity is then covered with a thick layer of a stiff paste of Formol Cement. After hardening, the cavity may be filled with Cement or Amalgam. When the cavity has to be filled immediately, or when a pressure on the pulp is to be feared by the act of chewing, it must be protected by a metal cap. In lateral fillings a thin layer of Gutta-percha will be found sufficient. An aching pulp may be relieved in a few minutes if caused by ossification, inflamed or partially destroyed pulp, by some dressings of the fluid, which may be put on hard or decayed Dentine, or directly upon the pulp, in short intervals of about five minutes.

At the same time we wish to draw attention to the wonderful and quick relieving effect of the fluid in Pulpitis. Pulps that are beyond healing must be cauterized, the crown pulp amputated, and the root stumps anesthetized with pure Carbolic Acid, and saturated after some minutes with Formaline 20 to 40 per cent., mixed with equal parts of Carbolic Acid 50 per cent., after which they must be covered with a thick layer of Formol Cement, and the cavity at once filled with Cement or Amalgam. This Formol Cement becomes very hard under the filling. By the slow hardening of the Formol Cement, the evaporation of the Formaline brings about a more extensive and prolonged effect, and this is still further increased by the lasting effect of the Antiseptic Cement.

Filling the root canal is best done by means of a fine nerve needle with a bit of cotton twisted on it, and for this purpose Formol Cement must be mixed thinner. Remnants of pulp that may happen to remain at the apex of the root will give no rise to inflammation, as it is mummified by the Formol Cement, which should be pumped up to the end of the root. A Cement or Amalgam filling may be made immediately and directly upon this root filling.

The Bottles should be kept well closed.

Price, per box.....$1.50

H. D. Justi & Son, Sole Agents.

The S. S. White Copper Amalgam.

This is a strictly reliable article. We have discarded all other from our stock.

PRICES:

1 Ounce $1.00
5 Ounces 4.00

Heating Spoon for Copper Amalgam.

The spoon is made of steel, riveted to end of shank. It should be used with C. S. handle No. 10. See page 205.

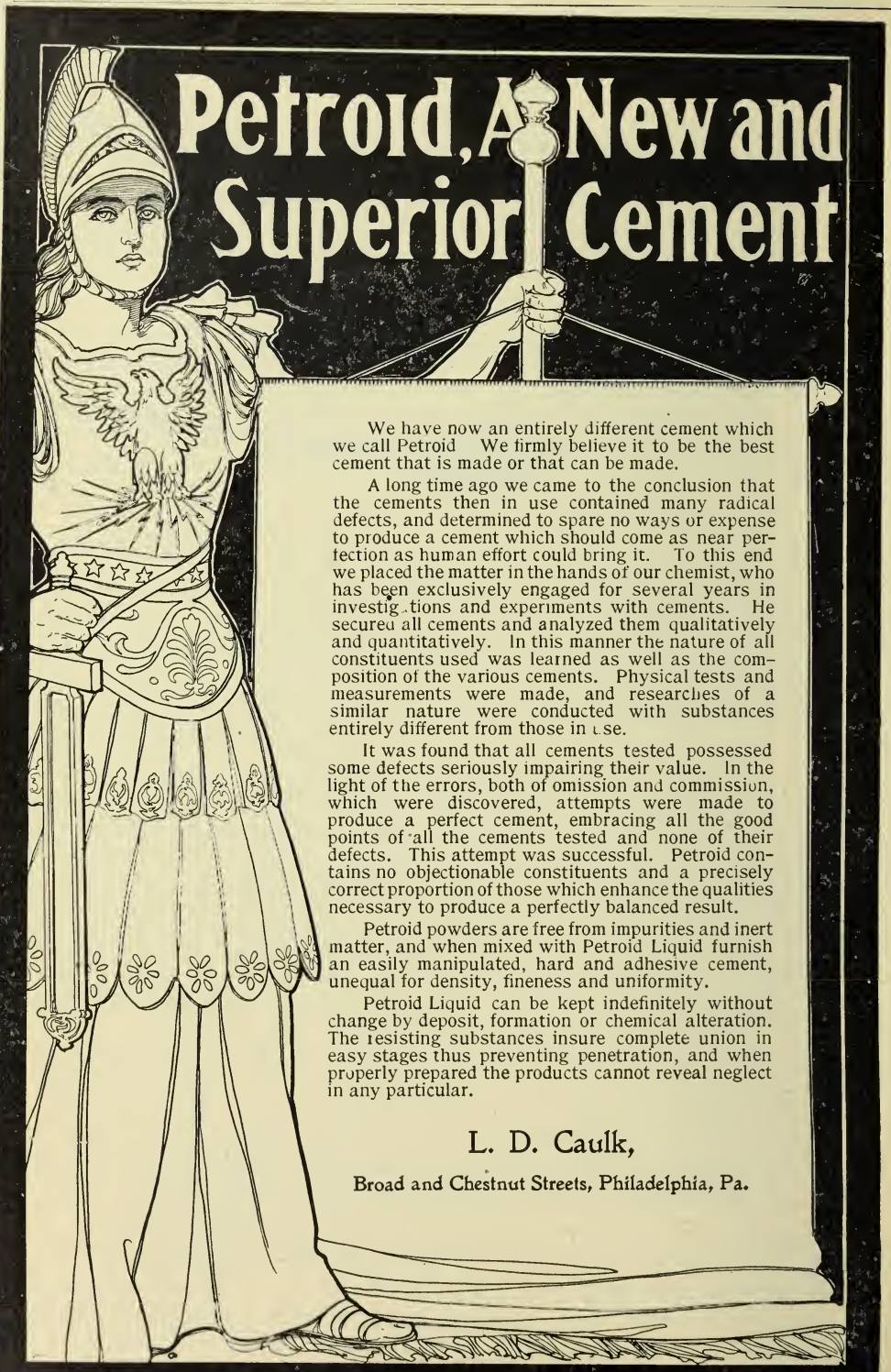
Price .....each $0.25

Tin Foils.

Globe Tin Foil, Nos. 4, 6, 8, 10, 14, 18 and 20, per book..... $0.50
Extra Tough Foil, Nos. 4, 6, 8, 10, 14, 18, 20, 30 and 40, per book.. .40
Chemically Pure Tin Foil..... .30
No. 60, for Celluloid Work..... .60

Miscellaneous Cements.

Agate, ½-oz. box, $0.75; 10 ½-oz. boxes, $6.00.
Agate, 1-oz. box, $1.00; 10 1-oz. boxes, $9.00.
Baldwin's Hydraulic, per box, $1.00; 10 boxes, $9.00.
Flagg's Oxychloride, per package, $1.00.
Formagen, small package, $1.50; large package, $2.50.
Fossiline, per package, $2.00.
Granit-Plombe, ½ ounce, $1.50; 1 ounce, $2.25.
Harvard, ½-oz. package, $1.25; 1⅛-oz. package, $2.25; 1⅛-oz. Asst. package, $2.50.
Houghton's Os Artificial, per package, $0.75.
Lynton, small size, per case, $1.00; large size, per case, $2.50.
Weston's Crown and Bridge, per box, $1.50; 10 boxes, $11.25.
Weston's Insoluble, one color, per box, $0.50; 10 boxes, $4.50.
Weston's Insoluble, two colors, per box, .75; 10 boxes, $7.00.
Weston's Insoluble, four colors, per box, .75; 10 boxes, $7.00.
Weston's Non-irritant, per package, $0.75.
Weston's Xenolite, ½-oz. package, $1.00; 1 1-3-oz. package, $1.50; large case, $1.50.


Petroid, A New and Superior Cement
We have now an entirely different cement which we call Petroid We firmly believe it to be the best cement that is made or that can be made.
A long time ago we came to the conclusion that the cements then in use contained many radical defects, and determined to spare no ways or expense to produce a cement which should come as near perfection as human effort could bring it. To this end we placed the matter in the hands of our chemist, who has been exclusively engaged for several years in investig.tions and experiments with cements. He secured all cements and analyzed them qualitatively and quantitatively. In this manner the nature of all constituents used was learned as well as the composition of the various cements. Physical tests and measurements were made, and researches of a similar nature were conducted with substances entirely different from those in use.
It was found that all cements tested possessed some defects seriously impairing their value. In the light of the errors, both of omission and commission, which were discovered, attempts were made to produce a perfect cement, embracing all the good points of all the cements tested and none of their defects. This attempt was successful. Petroid contains no objectionable constituents and a precisely correct proportion of those which enhance the qualities necessary to produce a perfectly balanced result.
Petroid powders are free from impurities and inert matter, and when mixed with Petroid Liquid furnish an easily manipulated, hard and adhesive cement, unequal for density, fineness and uniformity.
Petroid Liquid can be kept indefinitely without change by deposit, formation or chemical alteration. The resisting substances insure complete union in easy stages thus preventing penetration, and when properly prepared the products cannot reveal neglect in any particular.
L. D. Caulk,
Broad and Chestnut Streets, Philadelphia, Pa.

The Wilcox Non-Corrosive Cement Spatula.

Lee S. Smith & Son, Sole Agents, Pittsburg, Pa.

This is the only spatula that ought to be used for mixing any phosphate cement.

The reason it is the only spatula that ought to be used is because it is the only cement spatula that is non-corrosive.

The reason it is better to use a non-corrosive spatula than any other kind of spatula is because phosphate of iron is formed when phosphoric acid is brought in contact with steel. Phosphate of iron neutralizes a portion of the acid. It discolors the cement and decreases its hardness and density.

Many a bottle of acid has been spoiled by having a steel spatula dipped into it. It wouldn't hurt it to keep this spatula in it.

This spatula is made with a good-sized round handle that just fits the hand, and that makes it easier to manipulate this spatula than any other.

PRICES.

Complete as shown.....	each	$0.65
Cone socket blade.....	each	.50

DARBY'S DENTAL SPECIALTIES.

DENTAL CAPSICUM PLASTERS.

The old original and best in the market.
50 CENTS PER BOX OF 80.

STIFFENED PAPER POINTS.

For Drying Pulp Canals.
They find moisture after all drying processes have been employed.
Universally used.
25 CENTS PER BOX OF 100.

HARD BUFF POLISHERS.

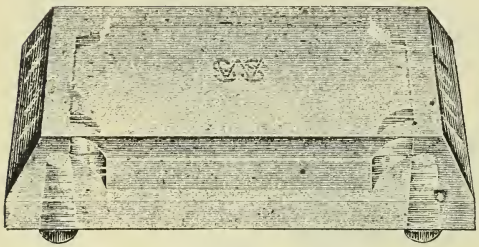
For the Dental Engine.
The only reliable ones on the market that will "stand up" under moisture.
40 CENTS PER BOX OF 100.
If your depot does not have them, send direct to manufacturer and get any size you want.

FRANK B. DARBY,

316 EAST CHURCH STREET, ELMIRA, N. Y.

Mixing Slabs for Cements, Etc.

No. 1. Glass Mixing Tablet, with Rubber Feet.

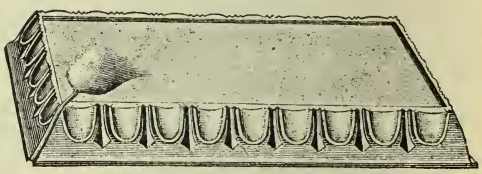


Size of Tablet, 4½x3¼ inches at base; ¾ inch thick.

The rubber feet of this tablet keep it from slipping on table.

Price.....$0.25

No. 2. The Richards—Porcelain.

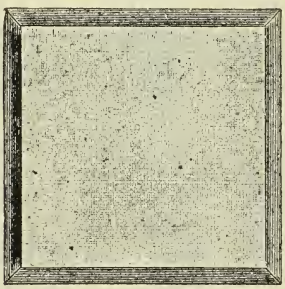


Shown about half size. Dimensions, 4¾ x3x¾ inches.

The depression is for collecting excess liquid. The under surface is roughened.

Price.....$0.30

No. 3. Beveled-Edge Glass. Shown about half size.



Edges beveled from both top and bottom. Top polished for mixing; bottom roughened.

Price.....$0.25

No. 4. Porcelain Palette.

Form used by water colorists. Three depressions. Measures 4x2½ inches.

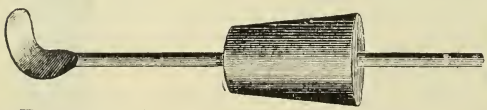
Price.....each $0.20

No. 5. Plane Glass. For Mixing Nerve Paste.

No. 5 is somewhat smaller than the others, in accordance with its special use in mixing small quantities of nerve paste. The size is 3x2½x¼ inch. Ground on the edges only. Both surfaces being of polished glass and readily cleansed, either can be used in mixing.

Price.....$0.12

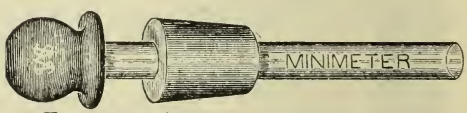
White's Cement Powder Scoop.



For conveying cement powder to mixing slab.

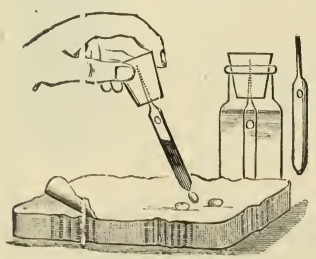
Price, each, 5 cents; per doz., 50 cents.

White's Minimeter.



For conveying cement liquid to mixing slab.

Price, each, 10 cents; per doz., $1.00

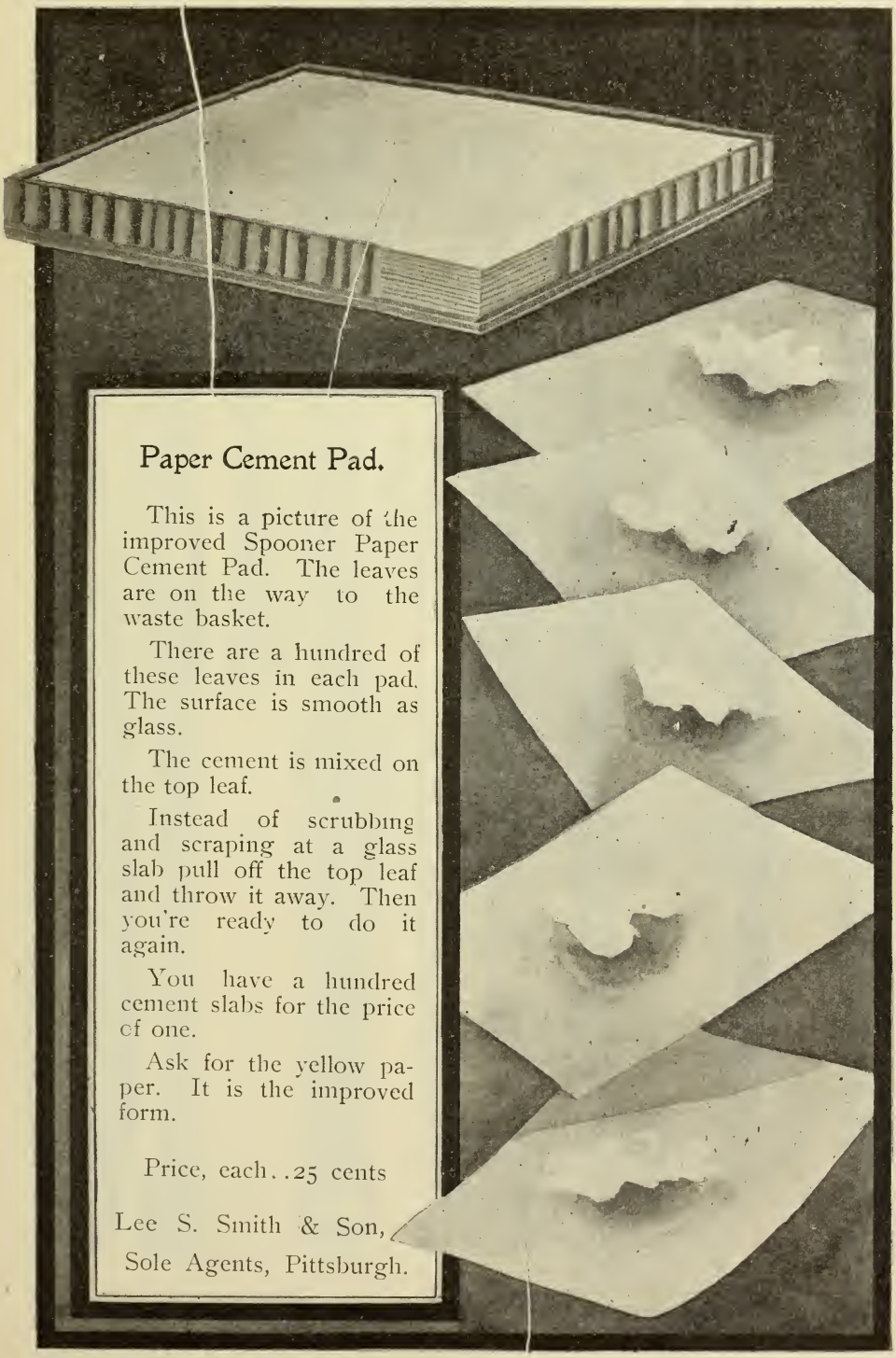


The Spooner Dropper.

Trade supplied by Lee S. Smith & Son.

Made of glass, pointed for inserting in cork of cement liquid bottle. Simply depressing the point places one to five drops of liquid just where it is wanted.

Price, each, 10 cents; per doz., $1.00



Paper Cement Pad.

This is a picture of the improved Spooner Paper Cement Pad. The leaves are on the way to the waste basket.

There are a hundred of these leaves in each pad. The surface is smooth as glass.

The cement is mixed on the top leaf.

Instead of scrubbing and scraping at a glass slab pull off the top leaf and throw it away. Then you're ready to do it again.

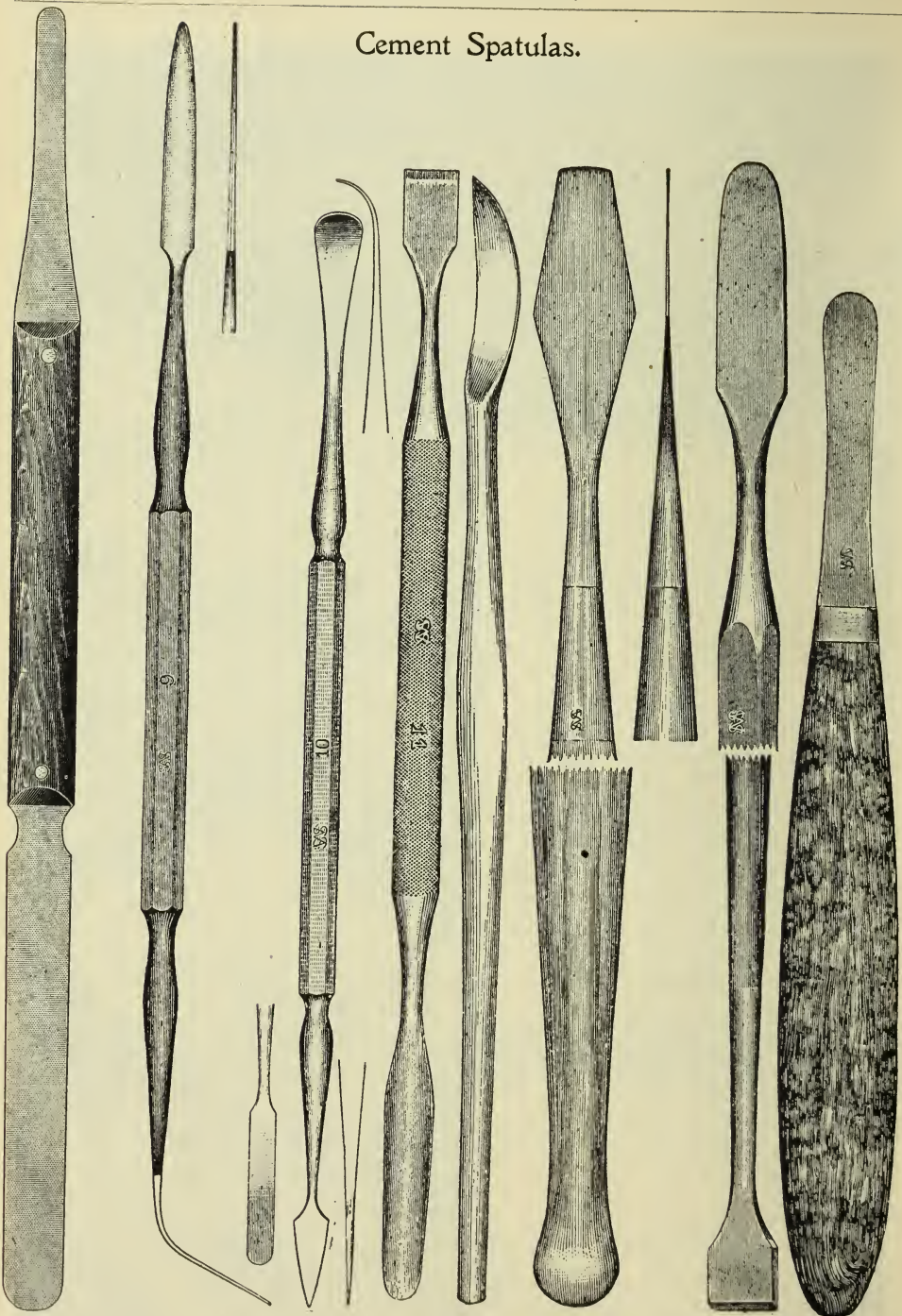
You have a hundred cement slabs for the price of one.

Ask for the yellow paper. It is the improved form.

Price, each..25 cents

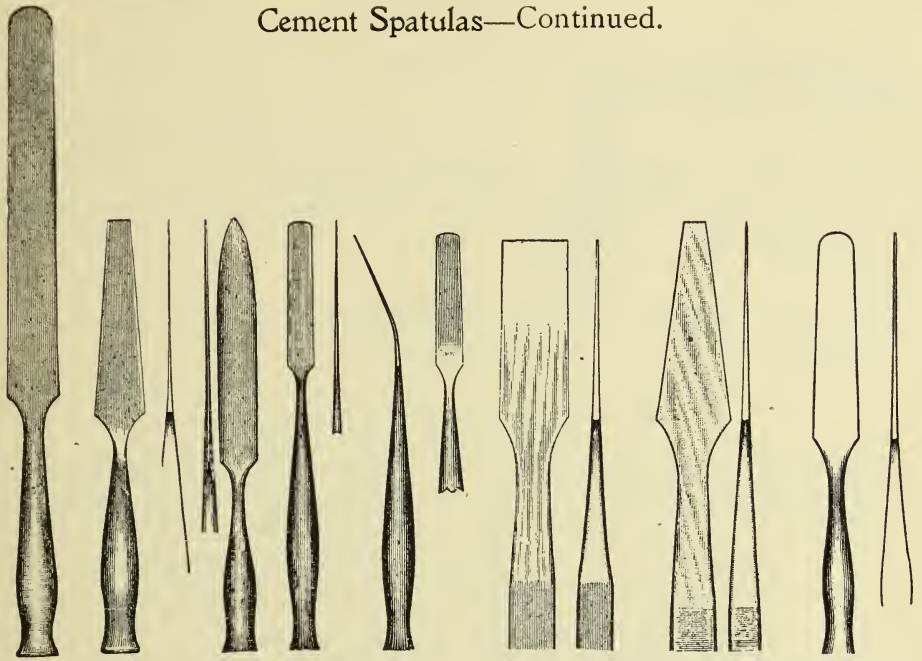
Lee S. Smith & Son,
Sole Agents, Pittsburgh.

Cement Spatulas.



For prices see next page.

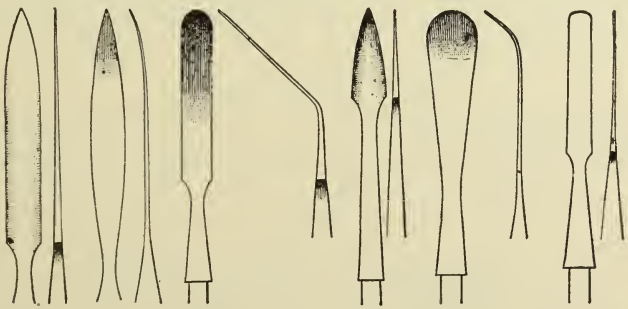
Cement Spatulas—Continued.



No. 9 No. 10 No. 11 No. 12 No. 13 No. 14 No. 15 No. 16

No.	1.	Boswell's	$0.70		
"	2.	Houghton's	.75		
"	3.	Taylor's	.75		
"	4.	Weston's	.50		
"	5.	Ivory	.40		
"	6.	Stiff Blade, wood handle	.75		
"	7.	Stiff Blade, steel handle	.75		
"	8.	Baker's	.75		
No.	9.	Boston	$0.50		
"	10.	Correct	.50		
"	11.	Flagg's	.25		
"	12.	Spring temper	.25		
"	13.	Ditto, curved	.25		
"	14.	Xenolite	.50		
"	15.	Crown and Bridge	.50		
"	16.	Peirce	.25		

Cone-Socket Cement Spatulas.



No. 1 No. 2 No. 3 No. 4 No. 5 No. 6

Cone-Socket Spatulas..... .....each $0.25

Gutta-Percha Fillings.

Hill's Stopping.

The oldest Gutta-Percha Filling on the market, put up in 1-20, 1-10, ¼, ½ and 1 oz packages.

Price, per ounce.....$5.00

Premium Gutta-Percha Stoppings.

Great density and fineness of texture. Makes durable fillings. Softens at 208° F. Put up in cake or stick form, in ½ ounce boxes.

Price, per box.....$1.00

Excelsior Stopping.

Especially adapted for mounting crowns where unusual firmness of support is required and for situations exposed to wear. Softens at 225° F.

Price, per ½ oz. box, assorted size pellets.....$1.00

Dawson's Improved Gutta-Percha Fillings.

Hand Made.

This Stopping is made from carefully selected materials, in small batches (few ounces each) to avoid the high temperature (and consequently dry and crumbling compound) that always destroys the more volatile constituents of high grade gum. It is of a quality that has never before been offered to the dental profession.

PRICES.

Pellets, Points, Cylinders and Wafers, per oz., $3.00; 2 oz., $5.00; 4 oz., $10.00; 10 oz., $20.00

S. S. White's Gutta-Percha Pellets.

A thoroughly reliable Gutta-Percha Filling, put up in Pellets of assorted sizes, in 1-20, 1-10, ¼, ½ and 1 oz. packages.

Price, per ounce.....$2.00

Gilbert's Temporary Stopping.

For the retention of medicaments used in the treatment of teeth and the filling of cavities temporarily; also for non-conducting layers in deep cavities, and for filling pulp-canals. Put up in ounce boxes.

Price, per box.....$0.50

Dr. J. Foster Flagg's Gutta-Percha Stopping.

Hand-made, under the personal supervision of Dr. Flagg. Adapted to regular, high or low heat.

Price, 1-5 oz. packages, per ounce.....$5.00

Temporary Stopping.

Dressing Seal.

For temporary needs. Softens with dry heat and is useful for many purposes, such as crowding tissue from marginal cavities, for quickly inclosing medicines within cavities, etc., etc.

Price, per box, two sizes.....$0.30

Constant Gutta-Percha.

In a very short time the "Constant" Gutta-Percha becomes exceptionally hard, and light burnishing will give it a polished surface.

"Constant" Gutta-Percha is put up in ½ oz. packages, either in cake or stick form.

Price, per ounce.....$2.00

Cavitine.

A superior lining for cavities. It is quick-drying, an effective insulator and preventive of pulp-irritation arising from the conduction of heat by metallic fillings, or from the action of zinc plastics. Cavitine is colorless, and is not affected by the fluids of the mouth, by moisture, or by chemical agents. A thin film of it upon the cavity wall aids in the preservation of the walls.

Price, per bottle.....$0.25

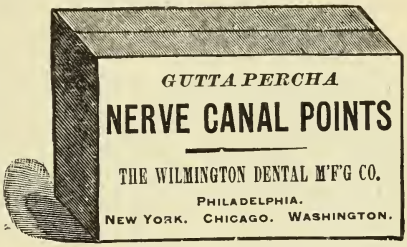
Sibley's Gutta-Percha "Nerve Canal Points."

From the Formula used by Dr. Dawson for the American Dental Mfg. Co., and later by the Wilmington Dental Mfg. Co.

Here are good old-fashioned, round, hand-made Nerve Canal Points, in which only the best quality of Gutta-Percha is used They are carefully made, nicely tapered, and being very tough admit of bending in any shape. Gutta-Percha as a root filling is becoming increasingly more popular, and in most all cases is much preferable to wood, metal, or paper.

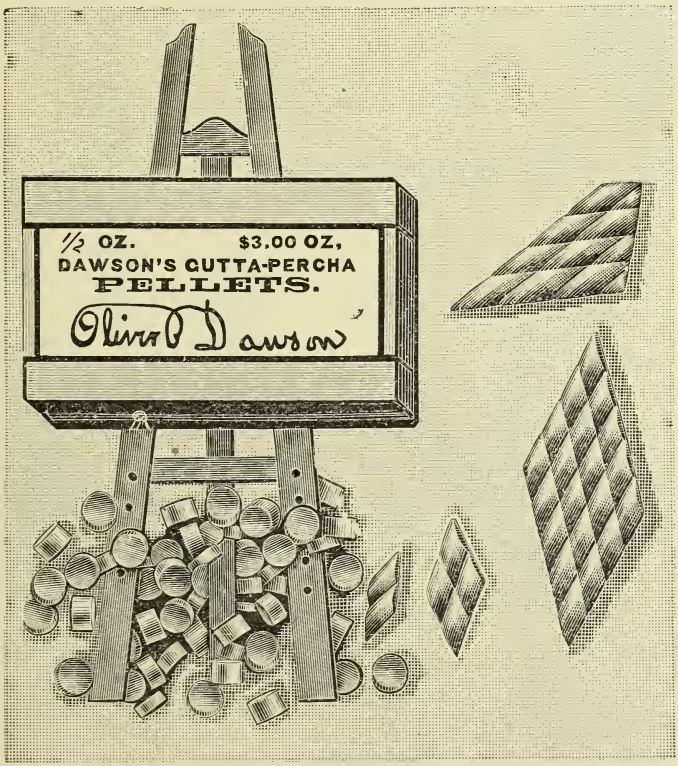
Put up in assorted sizes, and pink or white colors.

150 Points in a box, price..... .... $0.50



Dawson's Improved Gutta-Percha Filling.

(Hand-made.)
Made by Gideon Sibley.



This stopping is made from carefully selected materials, in small batches—few ounces each—in order to avoid the high temperature (and consequently dry and crumbling compound) that always destroys the more volatile constituents of high-grade gum.

In this Gutta-Percha for Permanent Filling we offer to the Profession the same quality and standard originally prepared by Dr. Dawson, which has had an immense sale for many years.

It was said of it some twenty years ago, "It is of a quality that has never before been offered to the Dental Profession," and we believe this may be truthfully said of it to-day. Made in pellet form.

Put up in ½ ounce, and 1 ounce boxes, per ounce..... .....$2.00

Sibley's Temporary Stopping.

For the retention of medicaments used in the treatment of teeth, for filling nerve canals, etc.

This Stopping becomes plastic at a very low heat, is very sticky and firmly adheres to the tooth, but not to a steel instrument. If properly manipulated, this Stopping will effectually seal the foramen, thus protecting the pulp; or serve the purpose of a temporary filling for weeks or months, according to the position of the cavity. It is also used for setting gold crowns.

Price per box, Pink, White or assorted colors..... .....$0.50

Dr. Wessel's Non-Conductive Cavity Lining.

Being non-irritating, as well as non-conductive, it makes an excellent capping for exposed pulps.

It is extremely "sticky," and so can be used for stopping a leak in the rubber-dam; for holding wedges in place; for preventing gutta-percha from drawing out of the cavity while filling and finishing. It will hold the first few pieces of gold in place, when starting a filling, thus doing away with the need for retaining pits. Its impermeability to moisture comes into play in keeping fillings dry until they have set hard.

Put up in ½ oz. ground-stoppered bottles.

Price, per bottle $0.35

Asbestos Felt Foil.

This material is recommended as excellent for lining cavities preparatory to filling with gold, amalgam or cement. It may be used as a covering for recently exposed healthy pulps.

Price, per envelope, containing 12 sheets $0.10

Pulp Canal Points.

Creasoted Charcoal	per tube of 12	$0.50
Gutta-Perch, machine-made, flattened	per box of 150	.25
Gutta-Percha, hand-made, round	per box of 150	.50
Lead, 100 in box	per box	1.00
Lead, 50 in box	"	.50
Paper, Darby's, 100 in box	"	.25
Tin, 100 in box	"	1.00
Tin, 50 in box	"	.50
Wood, 100 in box	"	.50
Rock Asbestos	per package	.25

Canal Point Carriers.

No instrument could be better adapted to the purpose for which it is intended than the Grooved-Beak Pliers. They are specially designed for handling Nerve-Canal Points. With the Flat-Beak Pliers it is very difficult to hold these small points securely while forcing them into the Nerve-Canal; but with the Grooved Beaks there would be no difficulty, the forms of the Points and the Plier-Beaks being perfectly adjusted to each other.

Price, nickel-plated, per pair $1.25

Temporary Gutta-Percha Cap-Crowns.

For the protection of teeth prepared for crowning against agencies which would irritate them and make their sensitiveness unbearable. The gutta-percha surface is soothing, and the Cap-Crown perfectly fends off cold draughts of air, acids, etc. These Cap-Crowns also afford an unequaled means of retaining medicaments in treatment or devitalization, especially in coronal exposures or in abrasion.

The Gutta-Percha Cap-Crowns are made in four sizes and put up in boxes containing one dozen, assorted sizes.

Gutta-Percha Cap-Crowns ..... per box $0.50

Interdental Space Guards.

An aid in preserving the deciduous teeth until the development of the permanent set causes their expulsion.

The metallic span is coated with gutta-percha on its convex (under) side. This is warmed and then carried to position on the point of the instrument. The span gives a firm support for a gutta-percha filling and protects the interdental tissues from encroachment of food.

PRICES.

Space-Guards (in boxes of 25)	per box	$0.25
Carriers (for Cone-Socket only)	each	.35

Redistilled Mercury in Mercury Holders.

In order to bring our Redistilled Mercury before the profession in a more convenient shape, we have designed a new Mercury Holder, made of pear wood, far superior to the glass bottles generally used.

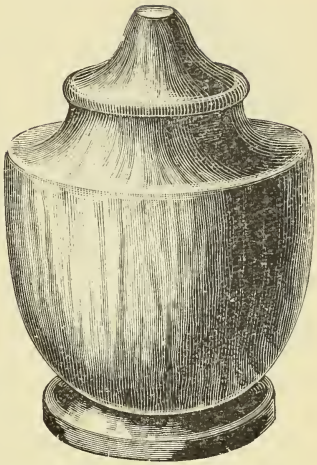
We furnish these Holders, filled with best redistilled Mercury at the same price as the bottled article.

To draw the Mercury, puncture the soft wooden plug on top.

Price per Holder, filled.....$0.50

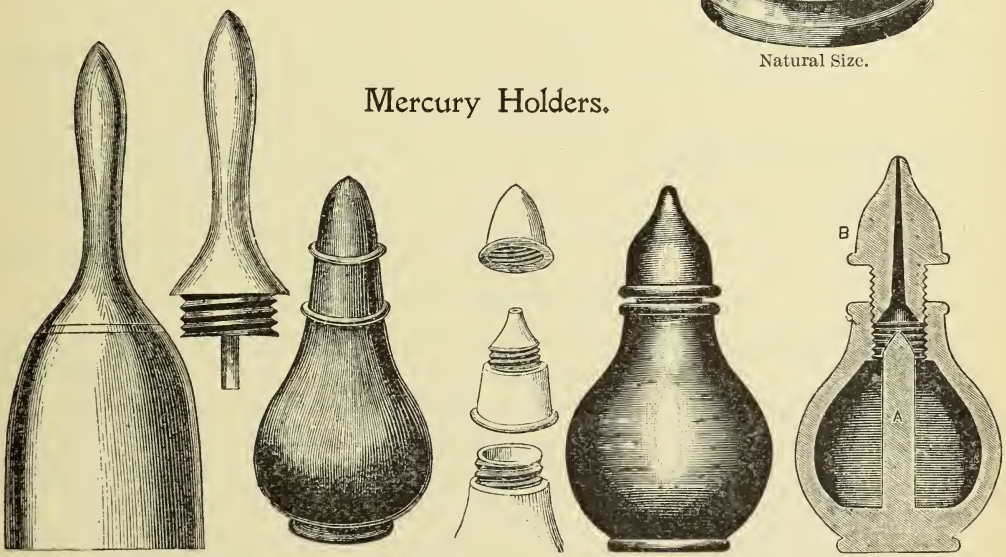
H. D. JUSTI & SON,

Philadelphia. Chicago.



Natural Size.

Mercury Holders.



No. 1. No. 2. No. 3.

PRICES.

No. 1. Empty.....$0.25; filled with 2 ozs. Mercury.....$0.50
" 2. Empty..... .50; filled with 2 ozs. Mercury..... .75
" 3. An improved form. The sectional view tells the story..each .50

Mercury.

Under our own name we put up the best Mercury we can buy. It is re-distilled. It isn't the sort to be had in drug stores, yet it is nothing but Mercury, pure Mercury. It is important to have the best. This is the best. We furnish it in ¼ lb. glass bottles, from which the Mercury may be readily transferred to the regulation wooden holder.

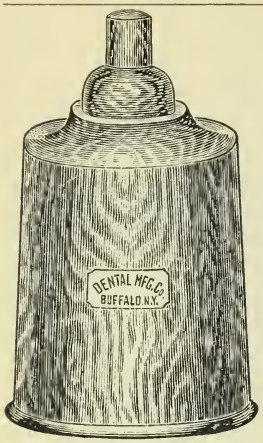
Price, per 4 ounce bottle.....$0.45

Mercury Expresser.

A tool for squeezing excess Mercury out of amalgam.

The action is simple and sure, and is analagous to the finger and thumb movement in common use, but much more powerful, and therefore more certain and more uniform.

Price $3.50



(Full Size.)

B. D. M. Co.'s Mercury Holder.

Filled with Re-Distilled Mercury.

We have designed a new Mercury Holder, made of pear-wood, and of a convenient shape for the operating table. This Holder is furnished

Filled with the Best Mercury that can be Produced,

and is sold at the same price as the mercury when put up in bottles. The mercury is obtained by drilling a small hole in the top of the Holder.

PRICE.

B. D. M. Co.'s Mercury Holder, filled with Mercury....50 cents.

Phillips' White Alloy.

MADE FROM CHEMICALLY PURE MATERIALS.

WILL NOT SHRINK NOR DISCOLOR. EDGE STRENGTH UNSURPASSED.

A trial is sure to convince any one that it is AS NEAR PERFECT as any Alloy made, and we have enough confidence in it to recommend it to the profession without reserve.

Price, per ounce $3.00

In ounce and half-ounce packages.

Austin Carborundum Strips.

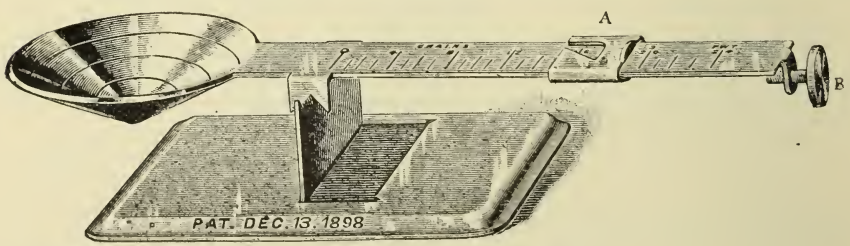
These Strips are made of the Richardson brand of linen, probably the strongest made. Each Strip is carefully cut lengthwise of the cloth, with the threads running parallel the entire length of the Strip, giving it great strength. The grit is fastened to the cloth by a special process known only to Mr. Austin. It is then forced into the cloth fibre and will not wear off as rapidly as on most strips. In fact, this

LASTING QUALITY

Is one of the special features of the Austin finishing Strips. GIVE THEM A TRIAL. THEY ARE WELL WORTHY OF IT.

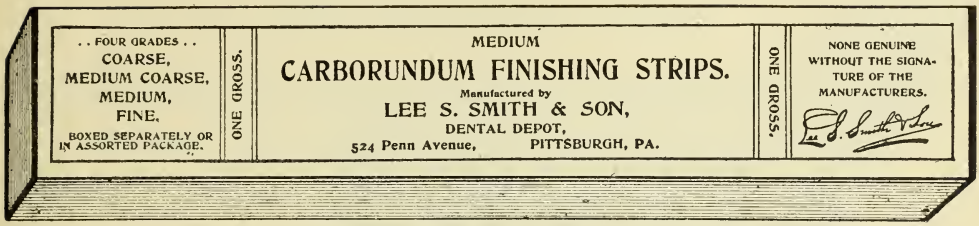
Price, 50 cents per box.		
	FINE.	NARROW.
	MEDIUM.	MEDIUM.
SEND FOR	COARSE.	WIDE.
A TRIAL BOX.	ASSORTED.	ASSORTED.

Wheeler's Alloy Balance.



For determining definite proportions of alloy and mercury.

Price $0.60



Carborundum cuts faster and cleaner than any other thing on earth, except the diamond. Every dentist on earth known that. Nobody ever seriously disputed it.

If it is properly applied, it will cut just as well on a strip, as in a wheel. If there is any difference, it ought to cut faster on a strip.

It is just about impossible to get the crystals off this strip. It is put on for keeps. It can hardly be scraped off with a knife. It took a lot of hard work to get the bond just right. It couldn't be improved upon.

The strips we make are as strong, or a little stronger, than any other strip made. It is possible to break them, but they won't break under any ordinary tension. We haven't found a strip that is as hard to break.

The pictures on this page are reduced pictures of the box that contains the only Genuine Carborundum Strip made.

There are probably a half-dozen imitations of these strips.

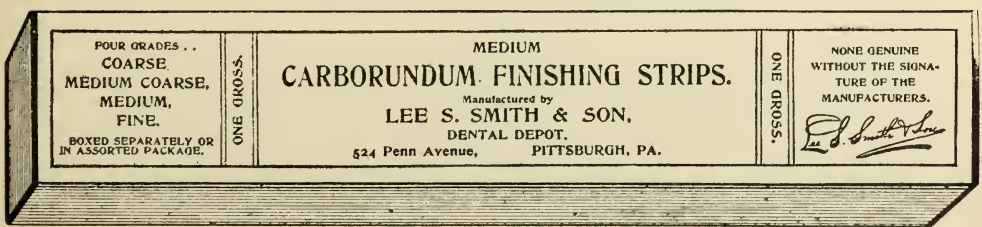
Some of the imitations sell at the same price. Some for less, but they are imitations.

We are sole agents for the Genuine Carborundum goods in the United States. The Carborundum Company will not sell a pound of Carborundum crystals to anybody else for any dental purpose.

The crystals with which these strips are coated, are washed and graded especially for us. It is possible to obtain the commercial grade of Carborundum by the car-load, but it isn't fit to coat strips with.

Price, per gross, - - - - - - - - - - - - - - - 50 cents.

LEE S. SMITH & SON (Makers), Pittsburg, Pa.



Finishing and Polishing Strips.

Dr. Howard's Dental Finishing Cloth Strips.

Have been Favorably known for Twelve Years

Made in four grits—Coarse, Medium Coarse, Medium, Fine and in three widths—Broad, Medium, Narrow. Put up mixed or separate, as desired, in boxes containing an amount equal to one gross, of medium width, seven inches long. Send for samples. Price per package, 50c.

Manufactured only by

CHAS. T. HOWARD, - ROCHESTER, N. Y.

Miscellaneous Strips.

Cloth Strips.

Emery and Crocus, per gross, $0.25.

The Davis French Cloth Strips, made in American Emery, French Emery, Garnet and Lava, per gross, $0.30.

Paper Strips.

Cuttlefish, French Emery and Lava, per gross, $0.20.

Chamois Polishing Strips.

Charged with Rouge, per box, $0.15.

Metal Polishing Strips.

Metal, used with wet pulverized pumice or other suitable powder, per box, $0.20.

Steel, Dr. Herbst's pattern, each $0.12; per dozen, $1.25.

Linen Strips.

Perfection Polishing Strips, Emery, French Emery, Garnet, Flint, Lava, Pumice and Rouge, per gross, $0.30.

Linen Cloth, per gross, $0.50.

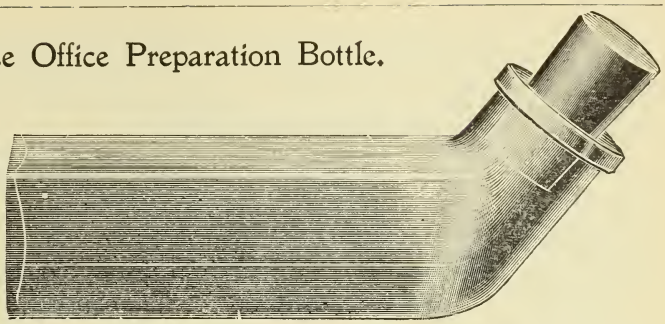
Lava Strips.

Two grades, coarse and fine, per gross, $0.20.

Celluloid Strips.

Celluloid Polishing Strips, per dozen, $0.20.

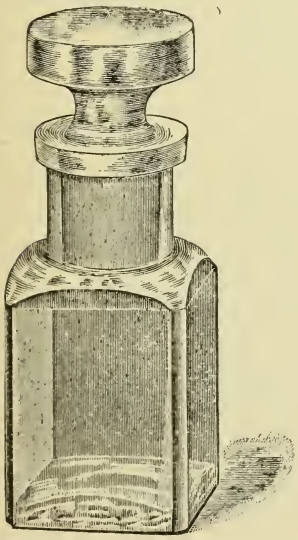
Common Sense Office Preparation Bottle.



This is a bottle that would stand on a dentist's table for twenty years and never upset. It can never lose its contents by any accident. There is plenty of room on the top surface for label.

The reason the bottle can't upset is because it lays flat on its side. The neck is bent upward as shown. This brings the last drop of medicine about as near the mouth as the first drop in an ordinary bottle. It is easy to get at the contents with hypodermic needle or dressing pliers. It isn't possible to grind the mouth of this bottle for glass stopper, hence it is furnished with best quality rubber stopper.

Price, each.....$0.08
Per dozen..... .80



Square Glass Vials.

With Ground-Glass Stoppers.

Half-ounce and one ounce Square Vials with ground-glass stoppers—known as "Case Vials"—suitable for office preparations.

Price, ½-oz. vials.....each, $0.10
Price, ½-oz. vials.....per doz., .80
Price, 1-oz. vials.....each, .15
Price, 1-oz. vials.....per doz., 1.50

Ten-ounce Square Bottles with Ground-Glass Stoppers.
Price, 10-oz. bottles ..... each $0.50
Price, 10-oz. bottles ..... per doz., 5.00

Drop Bottles.

Drop Bottles—2-ounce—for use with creosote, cement liquids, or other office preparations. The finger placed over the opening in the bulb controls the contents of the tube. The drop-tube acts as stopper for the bottle.

Price $0.25

Labels for Medicine Bottles.

Made by Gideon Sibley.

The Instant Location of any desired Medicine in Your Case made possible.

With these labels on the stoppers of your bottles, you will not need longer to pick up a dozen bottles before finding the one needed, and at the risk even then of making a mistake!

A box of these gummed labels, neatly printed in clear, bold type, includes one each of the names of Sixty-two different office preparations. Their use adds to the neat appearance of your medicine case, and the resulting convenience is out of all proportion to their cost.

Price ..... per box, 15 cents.

LO-BEL-O IS A COMBINATION OF FIVE MEDICAMENTS, IRRITANT AND FINALLY SEDATIVE—A PLASTER FOR USE IN PERIDENTAL TROUBLES, PERICEMENTITIS, TO ABORT, FORCE SUPPURATION, SORENESS, COLD AND NEURALGIA. ONCE TRIED ALWAYS USED. ORDER FROM DENTAL DEPOT OR SEND 60c.

TO BRYANT MFG. CO., CAMBRIDGEPORT, MASS.

LO-BEL-O IS THE ONLY PLASTER MADE THAT DOES THE WORK.
DR. LEAVITT
D.D.S.
HAMILTON PLACE, BOSTON.

LO-BEL-O

OFFICE OF C. N. PIERCE AND WALNUT ST., PHILA.

OF ALL THE PLASTERS I HAVE USED NONE ARE SO EFFICIENT AS LO-BEL-O. HOPE WE SHALL ALWAYS BE ABLE TO GET THEM.
W. A. PHREANER, D.D.S.

ANY DENTIST WHO DOES NOT USE LO-BEL-O OUGHT TO.
DR. BASTON
D.D.S.
HOFFMAN HOUSE, BOSTON.

Miscellaneous Capsicum Plasters.

Red Cross Dental Capsicum Plasters.
Johnson & Johnson.

Put up one hundred in a box in small envelopes of four plasters each, with directions for use.

One Hundred Plasters (25 envelopes) ..... per box, 50 cents.

Emp. Sinacine—A Dental Blister Plaster.
Johnson & Johnson.

A Plaster that is stronger than Capsicum.

Put up one hundred in a box in small envelopes of four plasters each, with directions for use.

One Hundred Plasters (25 envelopes)	.....per box, 50 cents.
Dr. F. B. Darby's	.....per box, $0.50
The S. S. W. D. M. Co.'s	..... per box, .60
The S. S. W. D. M. Co.'s	.....per dozen boxes, 6.00
Foulks' Capsicum Bags (12 in a box)	.....per box, .50
Foulks' Compound Bags (12 in a box)	.....per box, .50

Styptic Leaves.
Johnson & Johnson.

For Hemorrhage after Extraction.—Small sheets of compressed cotton fibre saturated with a solution of ferric chloride—an improvement on styptic cotton—cut in strips, a cylinder or conical plug may be rolled of the exact size desired and forced into socket under *strong pressure.*

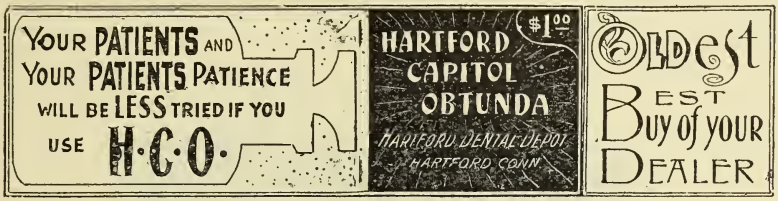
Put up in Boxes of 25 Leaves, 2x3 inches..... per box, 25 cents.

The Jiffy Bottle Cover.

This is a rubber cover to fit over the top of a local anæsthetic bottle. The needle goes right through the rubber. It catches the last drop. It is absolutely impossible to spill a single drop. The bottle is always air tight. You don't have to fuss around hunting for the cork. When you are through with the bottle put it wherever you want to put it. It is practically a self-corker. It is always ready for use. The cut shows how it is used.

Price, each, $0.15; or two in a box for $0.25

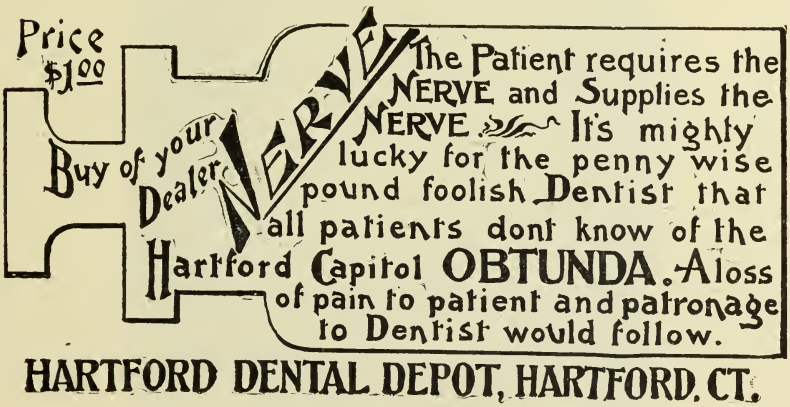
A Few Plain Words on a Painful Subject.



PAINFUL troubles between patient tooth-pullers and tooth pullers' patients have prevailed to a plane of prominence in the past. Painstaking dentists have taken pains from pleasing but petulant patients—for the price—from time past to present.

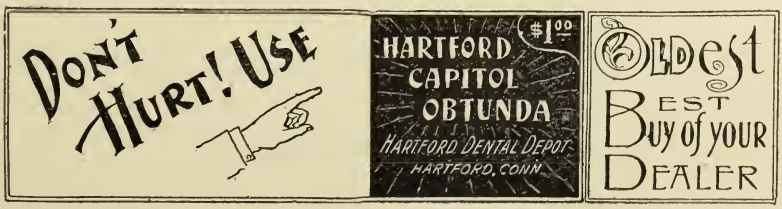
Then, it was with a plug, a push or a pull and an "O-h." Now, it is with pleasing painless pleasure and Hartford Capitol Obtunda.

The Obtunda is a true reliever of pain caused when you are applying the rubber dam clamp, the separator, the cervical clamp and in crown and bridge work.



It is an elegant preparation prepared expressly for operators who believe in supplying all the comfort and relief possible for appreciative patients.

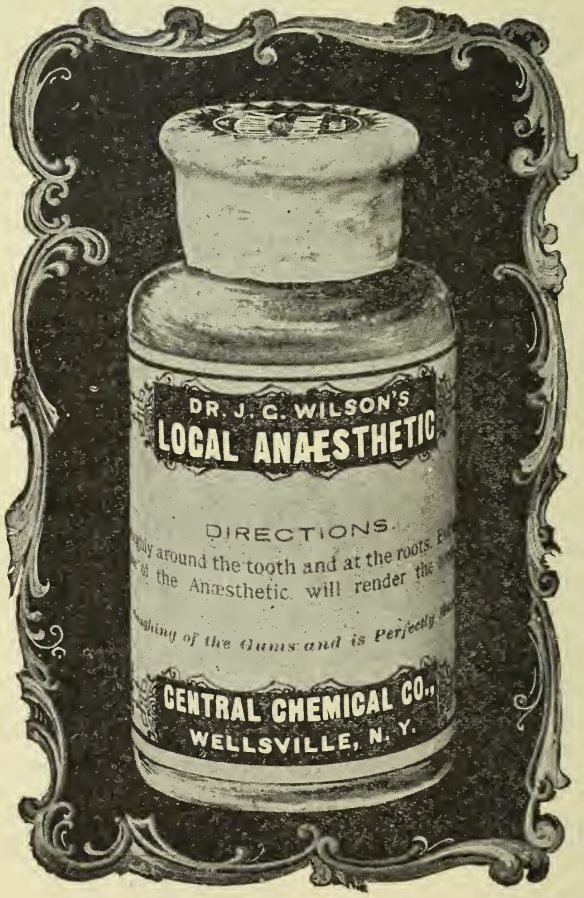
Sold by Dental Dealers, $1.00 per bottle. Perfumed.



The Reason

We keep publishing this cut is to make you so familiar with the appearance and the name of

Wilson's Anaesthetic.



that you might order it when you really meant some other make. If you do, you are friends of ours forever. You will be using the BEST.

One that is guaranteed to give satisfaction.

One that is non-secret.

1 oz., $1.00; 2 oz., $2.00; 6 ozs., $5.00; 20 ozs., $15.00.

For sale by all the leading dental supply houses, or mailed direct upon receipt of price.

CENTRAL CHEMICAL CO.,

Wellsville, N. Y.

Wilson's Local Anaesthetic.

The Anaesthetic that's used by Chinese, Japanese and Hindoo, in the bushes of Australia, the wilds of South America, the anaesthetic that gives pleasure to the profession among the British and the Boer, the French and German, Russian and Turk—

That's Wilson's.

The ANAESTHETIC that's made of carefully selected chemicals, the best and purest and most expensive; that's made so carefully that every bottle is put up as it it were an individual prescription,—

That's Wilson's.

The ANAESTHETIC that's guaranteed to give you perfect results, or your money will be returned for the asking; the ingredients of which you know as well as we,—

That's Wilson's.

The ANAESTHETIC that's sold and guaranteed by all the leading supply houses of the world, and manufactured by the CENTRAL CHEMICAL CO., Wellsville, N. Y.

1 ounce, $1.00; 2 ounces, $2.00; 6 ounces, $5.00; 20 ounces, $15.

That's Wilson's.

HYDROZONE.

In this Catalogue it is our intention to list every drug that can successfully be used by dentists.

The list of miscellaneous drugs will be found on pages 403 to 405.

There are a few drugs that merit more extended notice.

One of them is Hydrozone.

The use of Hydrozone in dentistry is already considerably large and constantly growing.

Leading dentists, particularly in New York, have given Hydrozone an extended and thorough trial and do not hesitate to pronounce it to be the best antiseptic agent that can be used.

The bactericide properties of Hydrozone are far beyond those of any other drug.

It can be used in dentistry without the slightest risk of poisoning the patient.

It is a certain and prompt cure for the diseases peculiar to dentistry and ulcerations of the mouth, or any affection characterized by the presence of pathogenic germs.

The agents generally used in dentistry and the treatment of diseases of the mouth are corrosive and poisonous.

The only exception is boracic acid, but it has no bactericide properties.

Creosote and carbolic acid are not only injurious but offensive in odor.

In Hydrozone we have an agent which is absolutely harmless and pleasant rather than objectionable both to the taste and to the smell.

It is healing and stimulating and will not harm the enamel of the teeth.

As a mouth and tooth wash Hydrozone leaves nothing to be desired.

It is used as a wash by forming a solution of one tablespoonful of Hydrozone to one tumblerful of tepid water, to be applied with a hard tooth brush.

Its use will keep the teeth perfectly clean without injury and the breath sweet.

Hydrozone is also of high value in the prevention and cure of the irritation produced by the pressure of the teeth upon the gums in dentition.

Used for this purpose a solution of one part Hydrozone to four parts water is the proper admixture.

It should be added that in no instance should Hydrozone be made either alkaline or neutral before using, even when it is applied to the most delicate diseased membranes.

PRICES:

Large Size Bottle	$1.25
Medium Size Bottle	.75
Small Size Bottle	.50
Ex Small Bottle	.25

Fletcher's Carbolized Resin.

The very Best Preparation for the Dentists' Operating Room.

Buffalo Dental Manufacturing Co., Sole Agents.

It has been on the American market for about fifteen years; is used by hundreds of the best dentists in the country; is universally liked, and no substitute has yet been found that is as effective. It is highly recommended as a substitute for creosote, in nearly every case, being more easily handled, and less disagreeable to the patient.

In most, if not in all, cases of exposed pulp, a few applications will so entirely destroy the sensitiveness, that the tooth may safely be filled without capping. It is an invariable specific for "tooth-ache," so called.

A plug of amadou or cotton, wet with Fletcher's Carbolized Resin and packed in the cavity, will stop bleeding instantly in cases where other remedies have failed.

Price, per bottle $0.25

Copal-Ether Varnish.

Fletcher's Copal-Ether Varnish is much better than Sandarac Varnish for all purposes where a varnish is required in the operating room.

Price, per bottle.....$0.25

Howard's Antiseptic Balsam Varnish.

For Anchoring Gold and Gutta-Percha Fillings, Lining Cavity, Etc.

Half of the failures with gold fillings are due to leakage, largely by faulty anchorage, a want of perfect adaptation, and failure to secure the first pieces introduced without changing the position.

By the aid of this antiseptic varnish this may be overcome, as the gold is cemented to the walls of the cavity and cannot become displaced, and very much better results are obtained. It will be found a valuable adjunct, facilitating operations, and enabling one to produce positive results, establishing a condition more favorable to success by interposing a non-conductor and antiseptic cavity lining.

It will insure a better class of operations at a great saving of time.

Prepared under the direction of Dr. F. E. Howard, Buffalo, N. Y.

Put up in packages of two sizes, with full directions. Sent by mail.

PRICES.

Large package $1.00
Small package ..... .50

Acodin.

Superior to Iodin as usually applied without Cataphoric Apparatus for the reduction of peridental inflammation. It is a regular pharmaceutical non-secret preparation, embodying the active principle of Aconite, Iodin, Tanin and Glycerin.

As a Catapho-Counter Irritant, applied topically, it gives instant relief. After one or two applications completely reduces acute pulpitis. Without electric current it excels all other preparations applied with cotton on tissue over root of affected tooth.

Price, per bottle.....$0.75

Necessities for the Dentist.

Pyrozone 3% Solution
Pyrozone 25% Solution
Vapocaine Tartarlithine

PYROZONE 3% SOLUTION.

A stable aqueous solution of $H_2 O_2$ conforming to the standard of the United States Pharmacopœia. Supplied only in 4 oz., chemically clean, glass-stoppered bottles.
Invaluable as a mouth-wash, and as a cleansing agent for the teeth. Destroys pus, blood stains, green-stain on the teeth, and prevents dental decay.

PYROZONE 25% SOLUTION (Ethereal).

Invaluable as a bleaching agent for the teeth, and for topical application in pyorrhœa alveolaris. Is also a valuable styptic in bleeding from the gums after extraction.

VAPOCAINE.

A scientific obtundent for sensitive dentine. Possesses great penetrating power and renders dental work expeditious for the dentist and easy for the patient. Superior to arsenic for bloodless extirpation of dental pulps. By using Vapocaine no fear of toxic effect on the surrounding alveolar structure need be feared.

Supplied in Small Glass Bottles, 50 Cents. Samples Free on Application.

TARTARLITHINE.

An effective remedy in the dental manifestations of gout. Recent researches have shown the co-existence of the uric acid diathesis with certain forms of pyorrhœa or suppurative gingivitis. Tartarlithine eliminates uric acid from the system and the promptness of its action in many cases of pyorrhœa is surprising. We have reports of numerous cases in which a cure has been effected.

Literature and Samples Free on Application.

McKESSON & ROBBINS, - NEW YORK.

SOLE AGENTS FOR THE DENTAL TRADE

The S. S. White Dental Mfg. Co.,

PHILADELPHIA, NEW YORK, BOSTON, CHICAGO, BROOKLYN, ATLANTA, ROCHESTER; BERLIN, (Germany); BUENOS AYRES, (R. A.); ST. PETERSBURG, (Russia).

Nerve Mummifying Paste.

Made by Gideon Sibley.

By the use of this Paste, teeth can be filled immediately after having been devitalized without removing the dead pulp or further treatment of any kind. Its application changes the dead pulp into material that may be utilized as a permanent filling. It is antiseptic, and does not discolor the teeth.

Price, per jar.....35 cents

Artificial Dentine.

For the Preservation of Exposed or Partially Exposed Pulps.

Gideon Sibley, Sole Agent.

The most acute pain in the pulp will be relieved almost instantly on the proper introduction of Artificial Dentine into the cavity. It does not require the use of the Rubber Dam, is easily applied, antiseptic, hardens the soft decay, and will not injure the mucuous membrane of the mouth. It is not a mumifier, but is a non-irritating substitute for natural dentine.

Price, per package, directions enclosed.....$1.00

Kelene (Ethyl Chlorid.)

An Obtundent for Sensitive Dentin.
A Local Anesthetic in Tooth-Extraction or Pulp-Extirpation.
A Reliever of Neuralgia.
A Diagnostic between Peripheral and Centric Neuralgias.
In ordering designate as straight or curved tube, plain or automatic cap, and give the size.

PRICES:

Large Tubes, 30-gram, Plain Cap, Straight or Curved	each	$1.00
Small Tubes, 10-gram, Plain Cap, Straight or Curved	"	.45
Small Tubes, 10-gram, Plain Cap, in lots of 10 Tubes	per tube	.40
Extra Large Tubes, 60-gram, Automatic Cap, Straight or Curved,	each	1.60
Large Tubes, 30-gram, Automatic Cap, Straight or Curved,	"	1.10
Small Tubes, 10-gram, Automatic Cap, Straight or Curved	'	.50
Small Tubes, 10-gram, Automatic Cap, in lots of 10 tubes	per tube	.45

Balsamo del Deserto.

When Balsamo is mixed with amalgam it causes the filling to be as poor a conductor of heat, cold and electricity as a cement filling, and is impermeable to the fluids of the mouth. The tooth-edge does not crumble as it does with amalgam alone. The filling does not blacken the tooth as amalgam fillings do, Balsamo keeping the filling from oxidizing.

Put up in half-ounce ground-glass stoppered bottles.

Price, per bottle.....$1.00

Baldock's Improved Nerve-Destroying Paste.

Made by C. Ash & Sons.

This is now prepared in the form of a soft inseparable paste, which renders it extremely easy of application. It has been more extensively used during the last seventeen years than any other known devitalizing preparation.

Per bottle $1.50

A DRUG ON THE MARKET

That is prepared by skilliul chemists, cannot help but be appreciated by the dental profession.

Our drugs are pure, properly compounded and are easily and quickly applied.

We wish to call attention to four specialties, viz: Mummifying Paste, Aromatic Iodoform Paste, Nitrate of Silver Discs and Arsenical Discs, as we are the original manufacturers of above named preparations.

ARSENICAL DISCS.

Small discs of asbestos treated with arsenious acid, opium and cocaine.

Easily applied, effective and prompt in action, less danger of its coming into contact with the gums or other mucous membrane. DIRECTIONS:—Dip disc in carbolic acid, glycerine, oil cloves or eugenol and seal in cavity.

A trial will convince you of the effectiveness of this preparation. Price, 75 cents a bottle.

MUMMIFYING PASTE.

To be used as a permanent root canal filling immediately after extirpating a devitalized pulp. No other treatment is required. Work the paste well into canal with a broach or upon a few fibres of cotton. May be used with advantage in abscessed teeth. The canal should be thoroughly dried with hot air before introducing paste, then seal with oxy-phosphate cement, and fill tooth as usual. Price, 50 cents a jar.

NITRATE SILVER DISCS.—Small discs of asbestos treated with a saturated aqueous solution of silver nitrate.

Asbestos being inorganic, and packing same immediately after treatment in amber colored bottles, insures the preparation from oxidation.

Used in treating deciduous teeth when too sensitive to be filled. DIRECTIONS:—Moisten disc with drop of water and wipe out cavity, thus preventing further decay. Price, 50c.

AROMATIC IODOFORM PASTE.—A paste composed of chemically pure iodoform, petrolatum and essential oils.

The latter not only increasing its antiseptic properties, but thoroughly disguising the odor of the iodoform. Price, 45 cents a jar.

We carry a full line of essential oils, drugs and chemicals. Also redistilled mercury, the best on the market; tooth powders, tooth washes, local anaesthetics and double strength dental tinctures. Write for price list.

H. T. THAYER & CO.

Manufacturers of Dental Pharmaceutical Preparations,

711 North Howard Street, BALTIMORE, MD.

Preparations for Office and Laboratory.

Acid, Carbolic, 1-oz. glass-stoppered bottles	per bottle,	$0.35
Acid, Carbolic, and Glycerol, 2-oz. bottles	"	.35
Acid, Salicylic, ⅛-oz. bottles	"	.20
Acid, Trichloracetic, 1-oz. bottles	"	.60
Acid, Trichloracetic, ⅛-oz. bottles	"	.20
Anæsthetic, Barr's	"	.75
Anæsthetic—Wilson's Local—see pages 396 and 397.		
Anti-Fog	per jar,	.25
Aresenical Compound, Foulks'	per bottle,	.75
Bay Rum, pint bottles	"	.75
Boro-Bornyl. pints	"	.75
Boro-Bornyl pints	6 bottles,	3.75
Boro-Bornyl, pints	12 bottles,	7.50
Boro-Bornyl, ½ pints	per bottle,	.50
Boro-Bornyl, ½ pints	6 bottles,	2.50
Boro-Bornyl, ½ pints	12 bottles,	5.00
Camphenol, Antiseptic, (Johnson & Johnson), put up in 8-oz. bottles (dilutes to from two to six gallons of solution.)	per bottle,	.25
Camphorated Phenol	"	.50
Carbolic Acid and Glycerine	"	.25
Carbolized Resin, Fletcher's	"	.25
Carvacrol	"	1.00
Cavity Lining, Wessel's, Non-Conductive	"	.35
Chlorid of Aluminum 1-oz. bottle	"	.35
Chlorid of Ethyl, "Kelene."		
Large Tubes, 30 gram, Plain Cap, Straight or Curved	each,	1.00
Small Tubes, 10 gram, Plain Cap, Straight or Curved	"	.45
Small Tubes, 10 gram, Plain Cap, in lots of 10 tubes	per tube,	.40
Extra Large Tubes, 60 gram, Automatic Cap, Straight or Cruved	each,	1.60
Large Tubes, 30 gram, Automatic Cap, Straight or Curved	"	1.10
Small Tubes, 10 gram, Automatic Cap, Straight or Curved	"	.50
Small Tubes, 10 gram, Automatic Cap, in lots of 10 tubes	per tube,	.45

(Continued on page 404.)

Dr. Wells' Periosteal Tablets.

Dr. Wells' Periosteal Tablets are a specific for all inflammatory conditions of the **Periosteal** and **Mucous Membranes** of the mouth.

Prompt application of these tablets will prevent hours of suffering and save the **vitality** of thousands of teeth. Seventy per cent. of the cases of **Alveolar Abscess** would be **averted,** and the other **thirty mitigated.** They quickly abate the inflammation from operations of fillings, pivoting, wedging, etc.

These tablets do not contain **Morphine, Cocaine,** or any of the **products of Coal-tar.** They can be used with absolute safety. Their action is in no sense counter-irritant, but **anti-phlogistic.**

Retail price.....25 cents per box.

No Dental Office complete without them.

Dr. Wells' "Dentocos Tablets" for Dentition.

The attention of the profession is called to **this remedy** for the ailments of **dentition;** by the use of **these tablets,** an easy eruption of the **teeth** is assured, and complete relief from the dangerous conditions which frequently accompany the process, such as **Cerebral Irritations, Convulsions, etc.**

Rickets, Curvatures of the Spine, Bow Legs, etc. will be averted by the administration of the **"Dentocos Tablets"** during the period of dentition and the child will start in life equipped with a set of **teeth** free from imperfections at the fissures, hard and perfect in formation.

Each tablet contains a small quantity of **Carbonate of Lime** obtained from the **Oyster Shell.** They are perfectly harmless, and agreeable to take. Compounded under Dr. Wells' personal supervision by

The Wells Manufacturing Co., 70 W. 40th St., N. Y.

Each box contains 3 mouth treatments, retail price 50 cents per box.

Chlorid, Zinc, 1-oz. bottle ..... per bottle, .30
Cleansing Paste for the Hands, The S. S. W. D. M. Co.'s, per doz., $3.00 ..... per box, .30
Cocain Discoids, 20 in Tube ..... ⅛ grain, $0.15; 1-5 grain, $0.20; ¼ grain, .24
Cocain Discoids, 100 in Bottle ..... ⅛ grain, .55; 1-5 grain, .85; ¼ grain, 1.00
Cologne, Bouquet, 12-oz. glass-stoppered bottles ..... per bottle, 1.50
Cologne, Ordinary, Pint bottles ..... " 1.00
Cologne, Oriental, 12-oz. glass-stoppered bottles ..... " 1.75
Creosote, 1 oz. glass-stoppered bottles ..... " .25
Creosote, Pure Wood, 1-oz. glass-stoppered bottles ..... " .50
Dentocos Tablets—Wells—see page 403.
Doilies or Napkins, 6 in. square, colored border ..... per doz., .50
Doilies or Napkins, 7 in. square, colored border ..... " .55
Doilies or Napkins, 6 in. square, colored border ..... " 1.25
Electrozone, 16-oz. bottles, per doz., $4.00 ..... per bottle, .50
Eucain Hydrochlorate, per ⅛-oz ..... " .60
Eucain Hydrochlorate, per ½-oz ..... " 2.00
Eucain Hydrochlorate, Sample package ..... " .35
Eugenol Oil, 1-oz. bottles ..... " .60
Glycerol (Glycerin), Pure, 2-oz. bottles ..... " .25
Glycerol (Glycerin), Pure, 8-oz. bottles ..... " .60
Good's Thymol Disinfectant ..... per can, .10
Guaiacocain ..... per bottle, .50
Gum wash—Antiseptic, Seabury—see pages 408 and 409.
Hydronaphthol ..... " .50
Hydrogen Dioxid—Oakland—see pages 406 and 407.
Hydrozone—see page 398.
Iodin and Carbolic Acid, 2-oz. bottles ..... " .25
Iodoform, ¼-oz. bottles ..... " .60
Iodoform, Compound, Foulks' ..... " .75
Iron, Solution Perchlorid of, 1-oz. glass-stoppered bottles ..... " .20
Iron, Persulfate of (Monsel's Solution), 1-oz. glass-stoppered bottles ..... " .20
Iron, Subsulfate of (Monsel's Powder), 1-oz. bottles ..... " .25
Liquid Gutta Percha, 1-oz. bottles ..... " .40
Listerine ..... " 1.00
Listerine, sample bottle ..... " .25
Litmus Paper, Blue and Red ..... per jar, .13
Meditrina, 8-oz. bottles, per doz., $4.00 ..... each, .50
Mercury, Redistilled, ¼-lb. bottles ..... per bottle, .50
Mercury, ¼-lb., in Wood Holder ..... each, .50

(Continued on page 405.)

PHILLIPS' MILK OF MAGNESIA.

(MgH_2O_2.)—FLUID. "THE PERFECT ANTACID."

The only neutralizing agent known
that will maintain a continuous alkaline condition in the mouth.

The only reliable medicament
for inducing an alkaline reaction of the whole gastro-intestinal tract.

A Bland, Non-Irritating, Agreeable, Harmless
ALKALINE ANTISEPTIC.

Rational therapeutics indicates its use in:
Erosion, Gingival Caries, the Tooth Caries of Pregnancy, and all oral pathological conditions due to hyperacidity of the mouth secretions, whether local or systemic in origin.

For Fermentative Dyspepsia
and the Colic of Infants it is a specific.

USE PHILLIPS' MILK OF MAGNESIA INSTEAD OF OTHER ALKALI.
Get the genuine (PHILLIPS') and caution your patients.

The Chas. H. Phillips Chemical Co., 128 Pearl Street, New York.

DENTAL MEDITRINA.

(Concentrated and Chemically Pure Electrozone.)

Produced from Sea Water by Electricity. A perfect dental deodorant, Antiseptic and germicide.

NON-TOXIC. NON-IRRITANT.

1st. It instantly and absolutely annihilates all germ life.

2d. Its application reduces all inflammatory conditions in a remarkably short time.

3d. It has strong styptic qualities.

4th. It perfectly deodorizes all fetid or putrid conditions or secretions.

5th. It instantly stops all fermentation.

Send for a Descriptive Pamphlet to

The Chemical & Electrical Company,

Sole Manufacturers and Owners,

120 Liberty Street, New York.

Preparations for Office and Laboratory.—Continued.

Milk of Magnesia	per bottle,	.50
Nerve-Fiber	per jar,	.75
Nerve-Paste (Arsenic and Creosote), ¼-oz. bottles	per bottle,	.50
Oil of Cloves, ½-oz. bottles	"	.20
Oil of Eucalyptus	"	.50
Periosteal Tablets—Wells—see page 403.		
Phenol Sodique, 8-oz. bottles	per doz., $3.50; "	.35
Potassa, Permanganate of (Crystals), 1-oz. bottles	per bottle,	.50
Pyrozone, 3% Solution, 4-oz. bottle	per doz., $4.50; "	.50
Pyrozone, 25% Solution, 1-oz. tube	per tube,	.75
Pyrozone, Atomizer	each,	1.25
Pyrozone, Atomizer, Extra Glass Tubes	"	.75
The 3% solution can only be sent by express. The 25% solution can be mailed at an additional expense of $0.15.		
Pyrozone Absorbent Tablets	per box,	.25
Robinson Remedy for Pyorrhea Alveolaris, etc.	per bottle,	.50
Salol	"	.25
Sanitas Oil, 1-oz. bottles	"	.20
Sanitol	"	.50
Sedative Antiseptic Dressing	"	.30
Silver, Nitrate of (Crystals), ⅛-oz. bottles	"	.30
Sodium and Potassium, Ward's 6 tubes in a box	per box	1.00
Tartarlithine Tablets	per bottle,	1.00
Tartarlithine and Sulphur Tablets	"	.75
Thycalol	Small, per bottle, $0.50; Large "	1.00
Thymol, Glycerol of, 1-oz. bottles	"	.40
Thymozone, 16-oz. bottles	"	.75
Tymozone, 6-oz. bottles	per doz., $5.00; "	.50
Tincture of Aconite Root, 1-oz. bottles	"	.15
Tincture of Arnica, 4-oz. bottles	"	.30
Tincture of Calendula, 4-oz. bottles	"	.35
Tincture of Capsicum, 2-oz. bottles	"	.25
Tincture of Iodin, 1-oz. glass-stoppered bottles	"	.25
Tincture of Iodin, Colorless, 1-oz. glass-stoppered bottles	"	.25
Vapocaine	"	.50
Volasem—an antidote to Cocain	"	1.00
Wine of Opium, 2-oz. bottles	"	.50

OAKLAND HYDROGEN DIOXID

"The kind that keeps"

Oakland Hydrogen Dioxid.

Two Points for the Dentist.

Oakland Hydrogen Dioxid produces the greatest degree of success for the operator.

Oakland Hydrogen Dioxid produces the greatest degree of comfort for the patient.

THE PRINCIPAL REASON why you should use Oakland Hydrogen Dioxid in your practice is because it stands in a class alone as an aid to dental surgery. It is a chemically pure wash for the mouth, teeth and gums with a positive, pronounced and clearly defined action all its own. It does all that any other wash may do; beyond that, it does things in the way of preparing the mouth for dental surgery that no other wash dare attempt to do. It is a revelation to the up-to-date dentist; it enables him to undertake difficult operations with reason, method and confidence. It helps to build a reputation for skill that wins patients and keeps them. It is not only a professional aid; it is a commercial necessity.

ANTISEPTIC. This is a wash which thoroughly arrests the processes of decomposition and prevents the growth of micro-organisms. It keeps the mouth pure and wholesome, nad maintains a condition of cleanliness. The known chemical activities of Oakland Hydrogen Dioxid are admitted by highest authorities to be particularly efficient in the treatment of morbid conditions of the gums and mucous membrane. It produces the highest receptive state of the organs and tissues prior to the application of other remedies.

GERMICIDE. The germicidal power of this preparation is far greater than carbolic acid and other so-called germicides which have outlived their usefulness. It has no disagreeable odor and carries our guaranty to be absolutely harmless. It penetrates and searches the dental structure, destroys and eliminates every form of microbe or diseased germ. The constituent elements of this wash cannot be so abused as to produce serious consequences. It may be applied freely to mucous or cutaneous surfaces without dread of injurious after-effects.

This is the *one* germicide which is really bad for the germ and good for the patient.

DETERGENT.—Cleansing and purifying in action, it in no way interferes with normal secretions or excretions. It does not interrupt the action of the salivary glands nor impede the digestive functions. By its chemical constituents it *must,* and *does,* serve to eradicate the causes and particles which lead to discoloration, decay and all the attendant distressing and painful complications. It destroys all fetid matter which naturally collects about the teeth under normal conditions.

DEODORANT.—An unexcelled deodorizer. This wash effectually absorbs and dissipates the odors that attend putrefaction or fermentation. It counteracts the gases which arise from infected matter; it removes every trace of taint, forces its way through cavities and interstices, insuring a healthful operation and a permanent state of cleanliness. It does what a mouth wash should do—it keeps the mouth clean.

STYPTIC.—The flow of blood after tooth extraction may be quickly stopped with this preparation. In this respect it is a surprise to the dentist, a relief to the patient. It is invaluable, also, in cases of hemorrhages caused by ulceration of the gums.

For general use Oakland Hydrogen Dioxid is unsurpassed as a dentrifice. It is *not* merely a pretty scented deception. It acts; it satisfies. We have received never a word of complaint, never a thing but praise for this invaluable preparation.

Oakland Hydrogen Dioxid was compounded for a purpose—it is not an accident born of random chance. How well it fulfils its purposes is attested by its enormously increasing sales.

It is the right thing. You should have it. Practitioners supplied at the following prices:

¼ lb. bottles	$0.30
½ lb. bottles	.45
1 lb. bottles	.75
5 lb. bottles	2.50

Prepared by
THE OAKLAND CHEMICAL CO.,
464 West Broadway, New York City.

OAKLAND CHEMICAL COMPANY
464 West Broadway
NEW YORK CITY

C.DAH.HELM N.Y.

SEABURY'S ANTISEPTIC GUM WASH

Pyorrhoea Alveolaris, Spongy Gums and After Extraction.

There are a great many so-called mouth-washes; most of them are merely "shampoos' for the teeth. Some of them are harmless, some of them are deadly, and still others are merely pretty, perfumed conceits.

You require a Gum Wash with a decided, prompt and powerful action. Your patrons demand it. Your reputation requires it.

Our Astringent Gum Wash is the matured product of chemical research. It is the result of close study of dental needs. It was compounded for a purpose. It was our aim to produce a preparation having a definite and positive result. It was our aim to give to dentists a gum wash which would cause the patient to rise from the chair and declare:

"That Man Knows His Business."

We have succeeded. There is no doubt of it. There is an increasing demand for the Astringent Gum Wash. It is a saturated solution of White Oak Bark, scientifically prepared, blended and aged in large oak casks. This insures great uniformity and strength such as cannot be attained by the chemist compounding in small quantities.

It is a non-irritant, chemically pure and absolutely harmless. There are no after-effects. It contains no cocaine or other injurious constituents.

This Is What It Does.

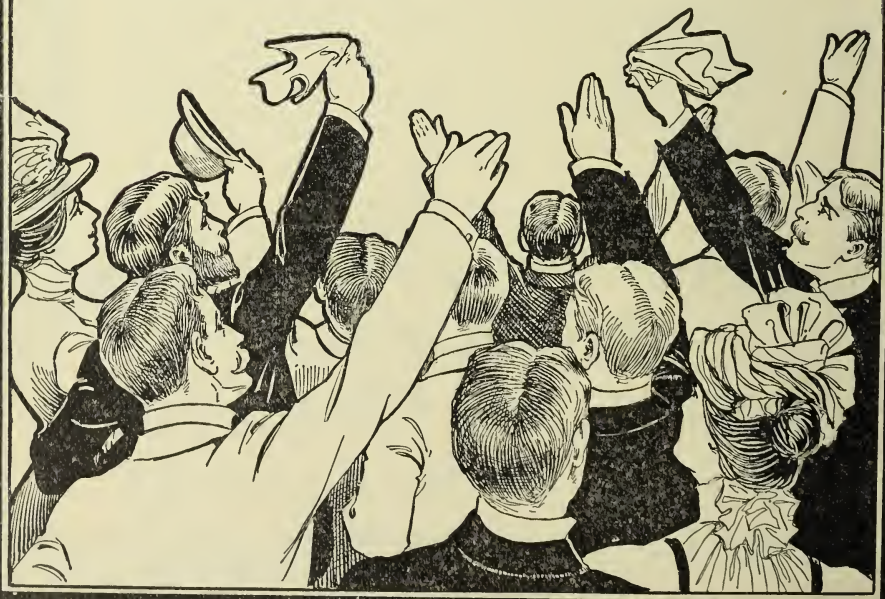
The Gum Wash absolutely prevents the recurrence or re-establishment of Pyorrhœa Alveolaris.

It counteracts the effects of ulceration, and allays all inflammation of the mouth and gums.

It kills and obliterates every trace of the germ. It removes the corpse. There are no remains.

It cleanses and purifies the dental structure, searching every cavity and every interstice.

It acts as deoderizer and disinfectant, leaving the mouth wholesome and free from taint.



CHARLES AUSTIN BATES N Y

SEABURY'S ANTISEPTIC GUM WASH

It effectually supersedes carbolic acid as a detergent. It treats chronic conditions of the mucous membrane.

This Is What It Doesn't Do.

The Gum Wash does not irritate. It is not followed by stringency, or bitterness.

It does not interfere with the process of secretion or excretion.

It leaves no nauseating taste or unpleasant odor in the mouth.

It does not fail at the right moment. It does all we claim for it.

We know you have had trouble with other mouth washes. They do not do exactly what you want them to do—they fall short. Better try the Astringent Gum Wash. It is tested and proven. If you are an unbeliever one trial will convince you.

The Astringent Gum Wash is a necessity on every cabinet. No really progressive dentist can do without it.

Do not give your patients a half-hearted treatment—they deserve the best. They should have it.

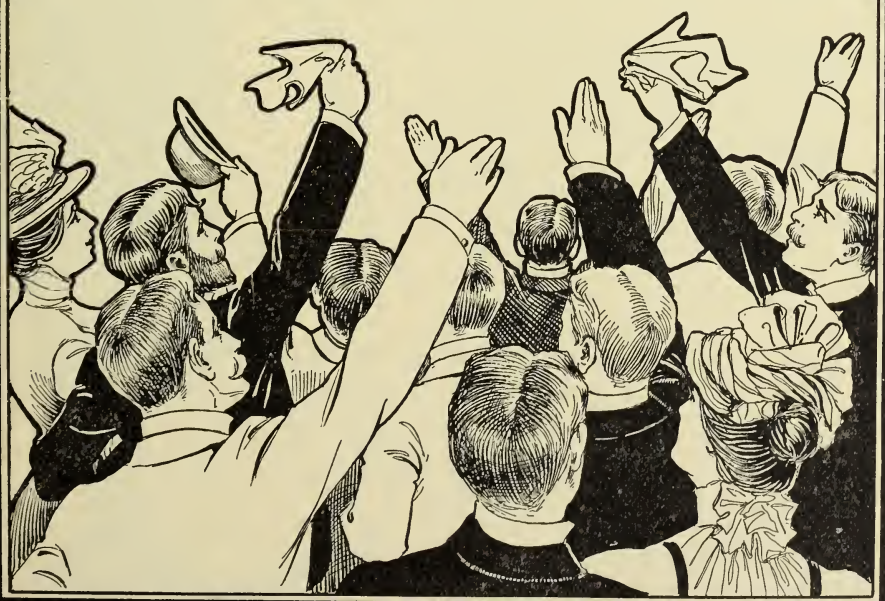
Do not overlook your own interests. Study and care may do much to increase your practice. "Genius is the capacity for infinite pains."

Proper aids are a great help to genius. Ours is one of the aids.

The Astringent Gum Wash is put up in two-gallon stone jugs. Price per jug, $9.00. It comes also in small sizes. Prepared by THE SEABURY CHEMICAL WORKS, Providence, R. I.

PRICE:

Twelve ounce bottle, per bottle, $1.00; per dozen, - -	$9.00
Six ounce bottle, per bottle, 50 cents; per dozen, - -	4.50
Two gallon jugs, each, - - - - - - -	9.00



CHARLES AUSTIN BATES N Y

Liquefied Nitrous Oxide.

Did you ever stop and consider how much depends upon using gas of absolute purity?

In case of accident did you ever stop and consider who will be held responsible? It isn't the man who makes it or the man who sells it, but the man who administers it.

It is of the utmost importance to know just what you are using. The name of the maker on the cylinder is just about as good a guarantee as we can get. If the name of H. D. Justi & Son or The S. S. White Dental Mfg. Co. is on it there isn't any use looking further. Either of those names is a guarantee of quality. We don't know of another that is.

We handle gas made by both of these firms.

We add to the makers' our personal guarantee of its absolute purity.

We also guarantee the amount of gas to be as stated on the label.

This may be tested by weighing the cylinder when full and again when empty.

When we ship the cylinder it is full. If it isn't full we don't ship it. It should be weighed again immediately upon receipt and in case of short weight, indicating a leak, we should be notified at once; otherwise he will not be responsible for loss of gas.

PRICES.

Small Cylinder, with 100 gallons of Gas	$9.00
Medium Cylinder, with 250 gallons of Gas	17.50
Large Cylinder, with 450 gallons of Gas	25.50
Refilling, Small (100-gallon) Cylinder	3.00
Refilling, Medium (250-gallon) Cylinder	7.50
Refilling, Large (450-gallon) Cylinder	13.50

Steel Gas Cylinder.

This seamless Gas Cylinder is made of a single piece of tough, fibrous steel.

Holds 2½ times as much N_2O as the old small cylinder, is only a trifle longer and weighs only one-third more.

Requires refilling only about one-third as often.

Has a steel cap to protect the valve from accidental injury.

Stands a strain far beyond that ever given to any previous make—tons of pressure to the square inch.

Costs with all its added safety and convenience only in exact proportion to its greater capacity.

Size (outside dimensions)—

Length, clear of valve and cap	17 inches
Length, including valve and cap	21 inches
Diameter	4 inches
Capacity: Liquified Nitrous Oxid	250 gallons
Compressed Oxygen	75 gallons
Average weight, including cap and valve	16 lbs.

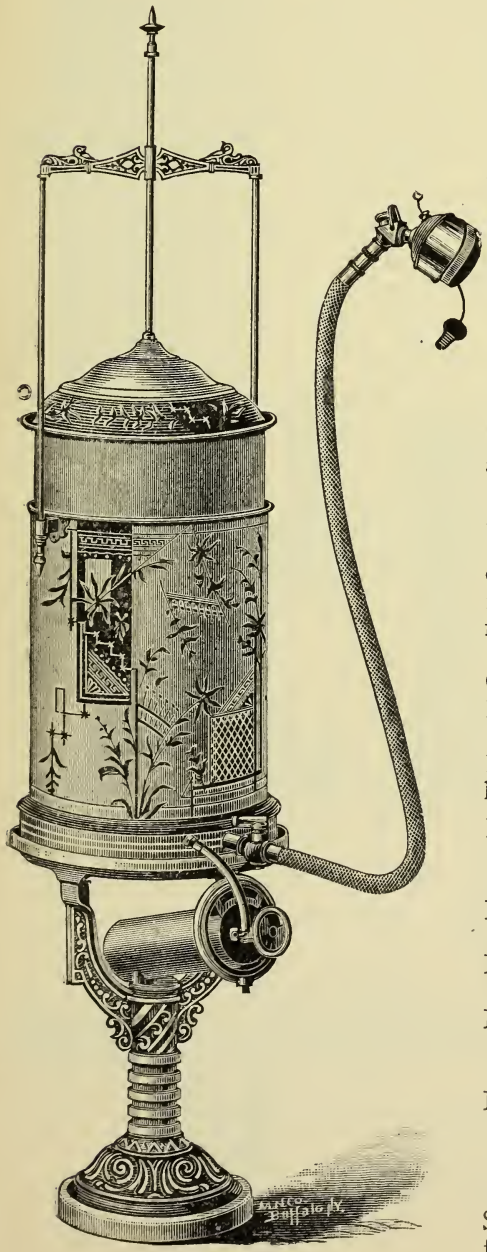
PRICES.

Seamless Steel Cylinder, complete	$10.00
Gas (Nitrous Oxid), 250 gallons	7.50
	$17.50

Prices of Various Parts of Gas Outfit.

Case, Horizontal, Leather-covered, Velvet-lined, Nickel-plated Mountings	$10.00
Case, Upright, Japanned, Nickel-plated Mountings	5.00
Gas-bag for Nitrous Oxid, 4½ gallons capacity	2.25
Gas-bag for Nitrous Oxid, 7 gallons capacity	3.50
Gas-bag for Oxygen, 1 gallon capacity	1.00
Key, Wheel	.25
Stop-cock, for insertion in small Rubber Tubing	1.00
Thimble, Nickel-plated, for securing Tubing to Yoke	.10
Tubing, Inhaler, Silk-covered, per foot	.40
Yoke Valve, Nickel-plated, with Tube for connecting Cylinder and Bag, and Thimble for securing Tubing to Yoke	1.50

The Lewis Gasometer for Nitrous Oxide.



This outfit combines all the necessary requirements for the successful administration of the gas. Its beauty of design renders it an ornament to any operating room. It has lately been much improved, both in workmanship and in design of ornaments. This Gasometer has from the first had an extensive sale and is the cheapest one on the market, taking its efficiency, durability and workmanship into consideration.

The body of the Gasometer is made of GALVANIZED IRON, and is placed upon an ornamental cast-iron stand, the whole being neatly japanned and ornamented. The stand is furnished with a support which will securely hold either a 100 or 500 gallon cylinder, enabling the operator to use either size, as may be desired.

The Gasometer is furnished with a water-seal, which may be adjusted to either wholly or partially sustain the weight of the bell, dispensing with balance weights, and preventing the escape of gas if the tap on the inhaling tube should accidentally be left open.

The economy of this apparatus is unquestioned, as gas left over after administration is saved, and in good condition for future use.

The fittings are all nickel plated. Capacity of Gasometer, about seven gallons.

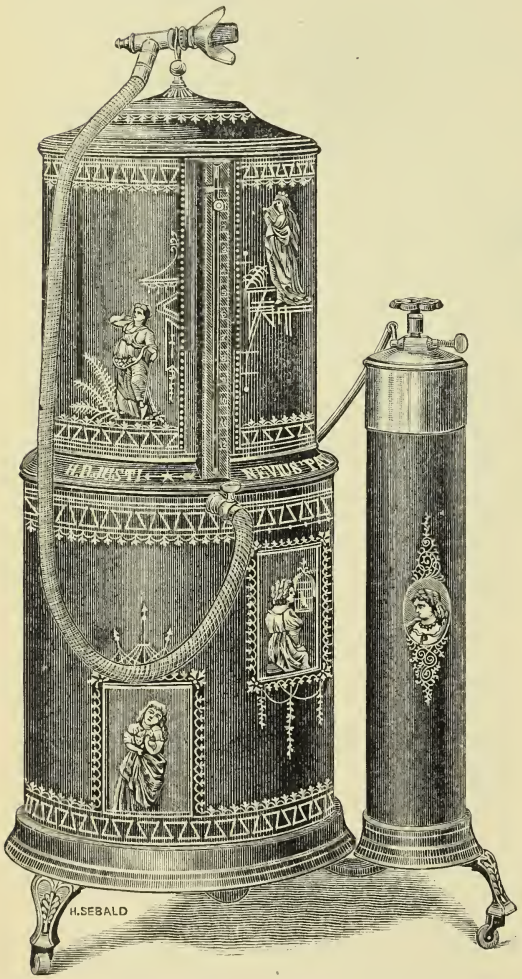
It is made in five styles: the No. 3, having a nickel-plated bell, being perhaps more serviceable than No. 1 or 2.

No. 1 Lewis Gasometer, blue, black or maroon, highly ornamented $33.00
No. 2 Lewis Gasometer, maroon striped 30.00
No. 3 Lewis Gasometer (No. 1 with sides of bell nickel-plated) 37.50
No. 4 Lewis Gasometer, ornamented brass, polished and lacquered 45.00
No. 5 Lewis Gasometer, orna mented brass, polished, nickel-plated 50.00

All prices include the Lewis Inhaler Support and White Metal Connection for tubing.

The Nevius Gasometer.

Patented August 14th, 1883.
H. D. Justi & Son.



"What We Believe."

We believe The Nevius Gasometer is the very best in the world. We have reason for our belief from the fact that nobody has ever been able to find any fault with it.

Dentists tell us that there is nothing about it that can be improved. They tell us that it really costs them nothing to buy it, because it saves enough gas to pay for itself.

It is a handsome apparatus, as the illustration shows.

It will adorn the finest operating room.

The Nevius Gasometer holds 12 gallons of gas. None is wasted. From 3 to 5 gallons is the usual quantity needed to completely anaesthetize a patient, and what remains can be retained in good condition for future use.

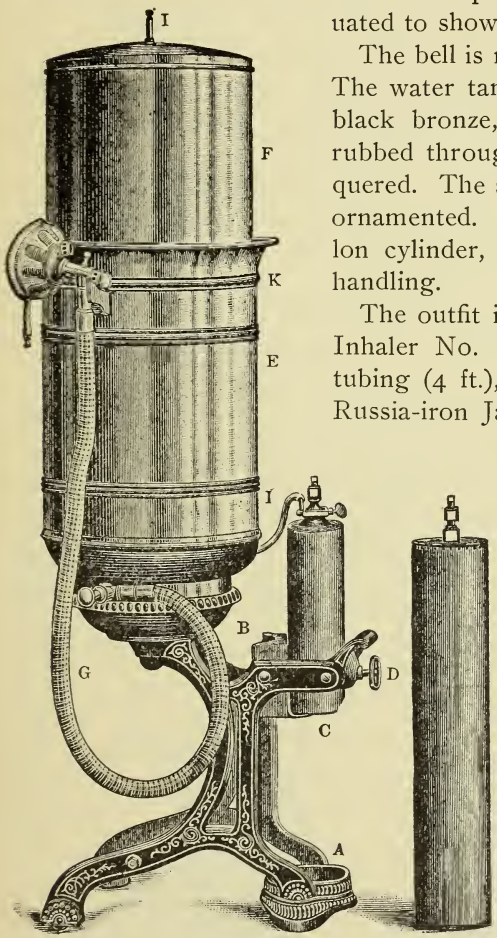
There is a scale on the bell of the Gasometer that shows the operator exactly how much gas he is administering, and the construction is such that the inhaling is decidedly easier than when any other apparatus is used.

The dentist who aspires to be the best in his profession in his city needs this Gasometer. Nothing short of the best apparatus will answer for this purpose.

Write to us and bother us with all the questions you would like to have answered.

Price, complete, including 100 gallons gas	$66.00
Gasometer, separate	40.00
Cylinder Stand	7.00

The S. S. White Gasometer.



The bell, which holds eight gallons of gas, works on a nickel-plated guide-rod. The guide-rod is graduated to show the quantity of gas in the bell.

The bell is nickel-plated all over, the top burnished. The water tank is finished on the outside in a blue-black bronze, oxidized, with the beads and edges rubbed through to the polished brass, the whole lacquered. The stand is of cast iron, japanned black and ornamented. Will hold either 500-gallon or 100-gallon cylinder, and is on rollers for convenience in handling.

The outfit includes yoke and rubber tubing (1 ft.), Inhaler No. 3 with Inflatable Face-piece, Inhaler tubing (4 ft.), and metal connection, wheel key and Russia-iron Jackets for the large and small cylinder, everything complete, ready to attach a gas cylinder.

Directions for setting up and operating accompany each Gasometer.

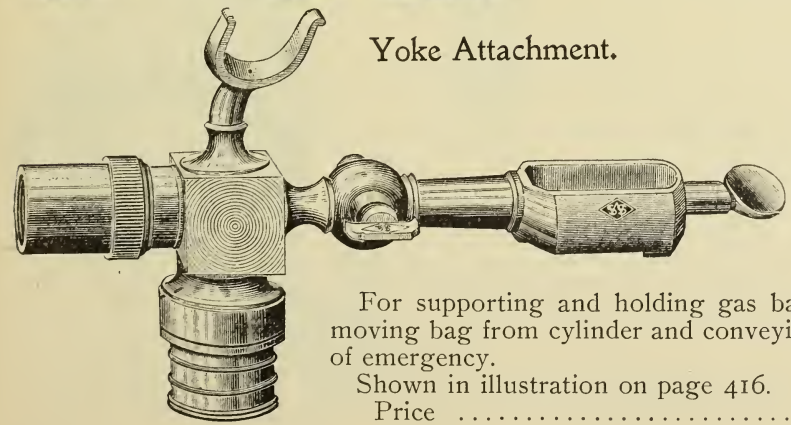
Price, Complete Apparatus, except Gas Cylinder and Gas $68.00

Price, Complete Apparatus, with Small Gas Cylinder, containing 100 gallons of Gas 77.00

Price, Complete with Large Cylinder, containing 450 gallons of Gas..... 93.50

Boxing Free.

Yoke Attachment.

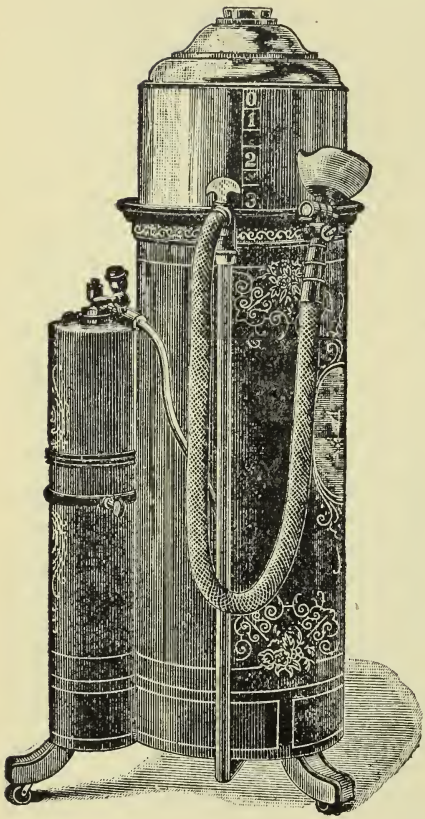


For supporting and holding gas bag, also for removing bag from cylinder and conveying gas in cases of emergency.

Shown in illustration on page 416.

Price $8.00

Long's Gasometer.



This is a good Gasometer. It is the only one we know of with copper receiver.

The metal tube and attachments are all nickel-plated and the apparatus is highly ornamented, making upon the whole an elegant object in the office.

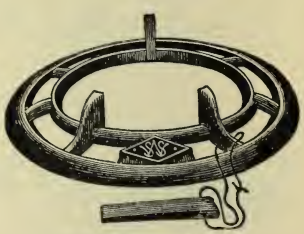
The receiver holds about ten gallons of gas, and registers the amount inhaled by the patient.

A float seals the gas chamber, which is always dry. Gas can be kept as long and pure in the Gasometer as in the cylinder.

At the base is fastened a metal cylinder holder that will receive any size gas holder.

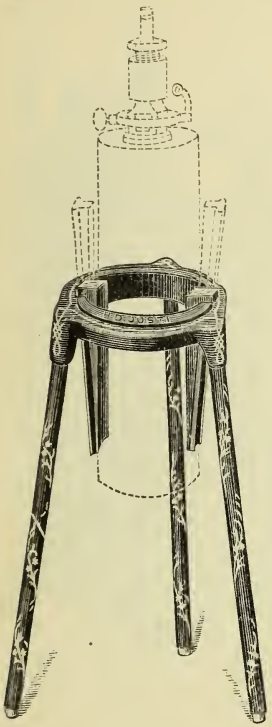
No. 1 Gas Apparatus, made of Copper, with attachments, 100 gallon Gas Cylinder, filled; Long's Inhaler, including boxing	$73.25
No. 1 Gas Apparatus, with Chloroform Attachment, and Tubing	55.00
No. 1 Gas Apparatus—less tubing and attachment	50.00
500-gallon Cylinder, without gas	12.00
100-gallon Cylinder, without gas	6.00
Nickel-plated Receiver, extra	10.00
Inhalers Nos. 1, 2 and 3	8.00
Chloroform Attachment	3.00
Rubber Hood	1.00

Foot-Piece for Cylinders.



The handling of gas cylinders, especially those containing oxygen, which are usually manipulated by patients or their attendants, is greatly facilitated by the use of a light base or Foot-piece for holding them upright. The bottom of the cylinder is set into the Foot-piece, and the wedge is forced between the cylinder and one of the upright supports to take up any play. So placed the cylinder is held firmly and steadily, and the upright position is preferred by some.

Price for Small Cylinders	$0.25
Price for Medium Cylinders	.65



Adjustable Tripod.

Nos. 3 and 4.

The Adjustable Tripod will adapt itself to cylinders of any size from 100 to 500 gallons. This is accomplished by raising the self-locking wedge-shaped bolts to a sufficient height to allow the cylinder to pass through, when, dropping the bolts, the weight of the cylinder will force them downward, clamping the cylinder firmly and requiring no further fastening.

PRICES.

No. 3 Tripod with 4½ gal. Gas Bag, 100 gal. Cylinder and Gas.....$27.25
No. 4 same with 7 gal. Gas Bag..... 28.50
Tripod, separate 4.00

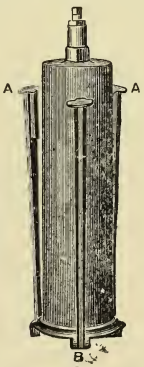
Improved Cylinder Holder.

Nos. 5 and 6.

The cut represents the latest and best Cylinder Holder. It may seem a very simple matter to make a good cylinder holder, but to make one to conveniently hold two different sizes—500 gallons and 100 gallons—has proved quite difficult. In the one we now offer the objections are all overcome, and it combines beauty of design and finish with convenient adaptation to either size of cylinder.

For the 500 gallon cylinder it is only necessary to remove the cap at the top of the holder and place the Cylinder inside.

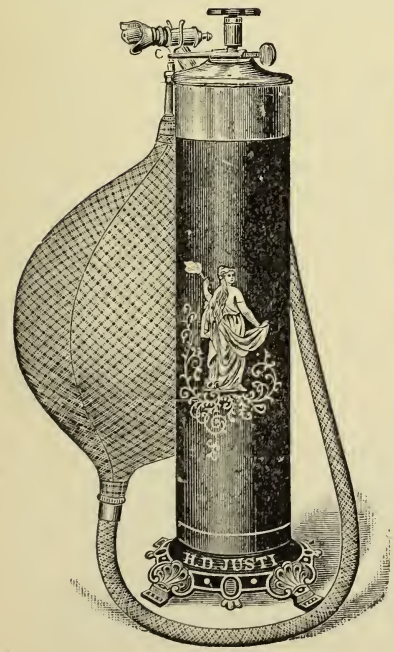
For use with the 100 gal. Cylinder see Fig. 2.



The rods, A, are hinged to a circular base, B. The rods are thickest at the top, and when the Cylinder is placed in the Holder the rods are forced against the Cylinder and hold it firmly against turning.

The body of the Holder is black, japanned and handsomely ornamented with various figures and designs.

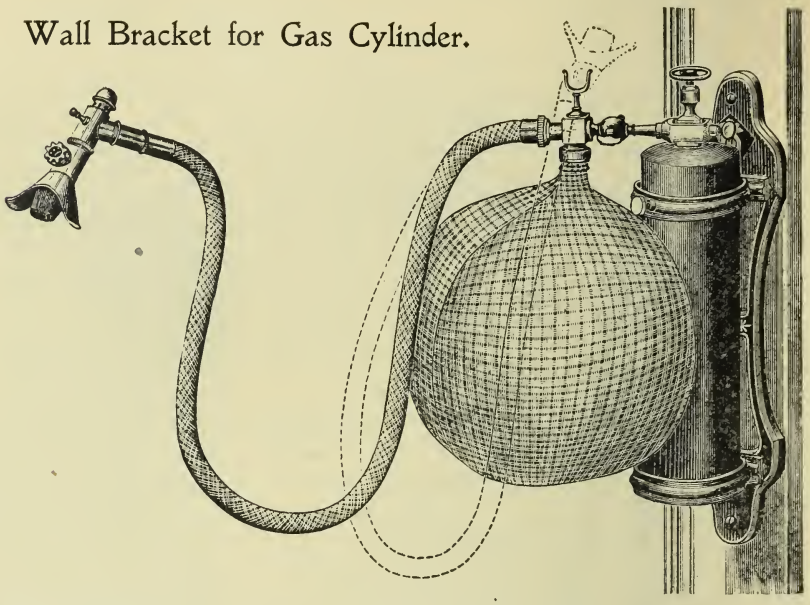
At C, fig. 1, is shown an improved cylinder attachment, with a support for the inhaler.



PRICES.

No. 5 Apparatus as shown in cut, 4½ gallon Gas Bag, 100 gallon Cylinder and Gas $30.25
No. 6 same with 7 gal. Gag Bag..... 31.50
Cylinder Holder, separate..... 7.00

Wall Bracket for Gas Cylinder.



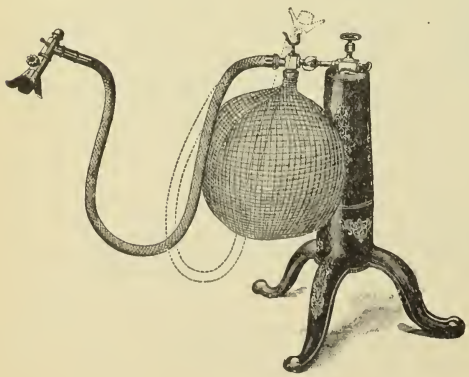
This is an excellent device for use in offices where the Gas is administered frequently. The Bracket may be attached to the window casing or other woodwork. The whole arrangement will be found compact, convenient and ornamental.

PRICES.

Complete as shown, with 4½ gallon Bag and filled Cylinder	$33.50
Complete as shown, with 7 gallon Bag and filled Cylinder	34.75
Wall Cylinder Bracket, separate	4.00

Downs Stand for Gas Cylinders.

The Downs Stand is a simple and convenient device for holding Gas Cylinders, especially designed for use in the operating room of the resident dentist. With the Yoke Attachment it makes a very efficient and convenient apparatus.

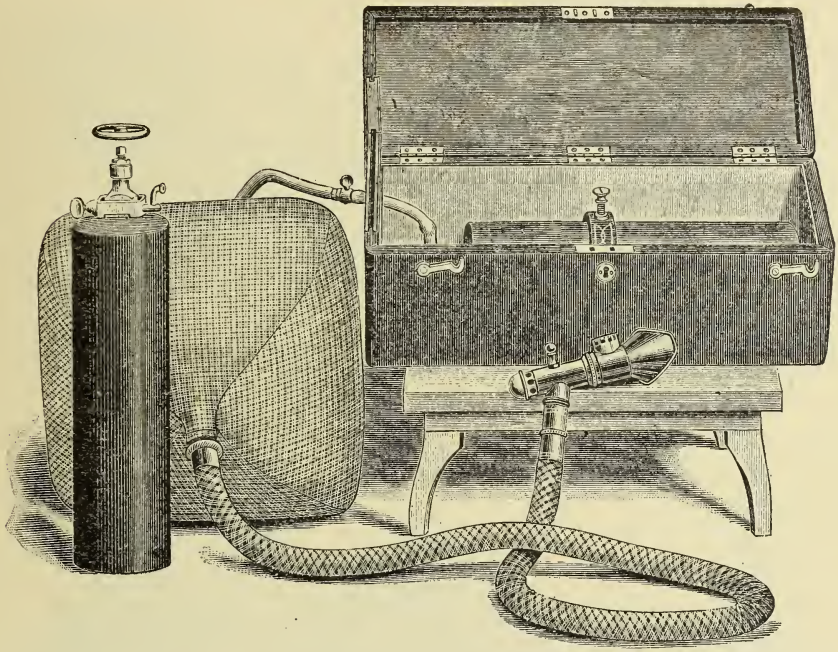


It consists of an iron base with a tin casing, in which the cylinder is placed and securely held by a set-screw. Two sizes. Specify which you desire when ordering.

PRICES.

With Small Cylinder (filled with 100 gals. Gas) and 4½-gal. Bag.	$34.00
With Small Cylinder (filled with 100 gals. Gas) and 7-gal. Bag.	35.25
With Large Cylinder (filled with 450 gals. Gas and 4½ gal. Bag.	53.00
With Large Cylinder (filled with 450 gals. Gas) and 7-gal. Bag.	54.25

Surgeon's Cases, Rectangular.



The Case is made of well-seasoned wood, lined with velvet and covered with leather, and the mountings are nickel-plated. A stout cast-steel ring, neatly japanned, with a heavy set-screw, clamps the cylinder. Size 18x7x7 inches.

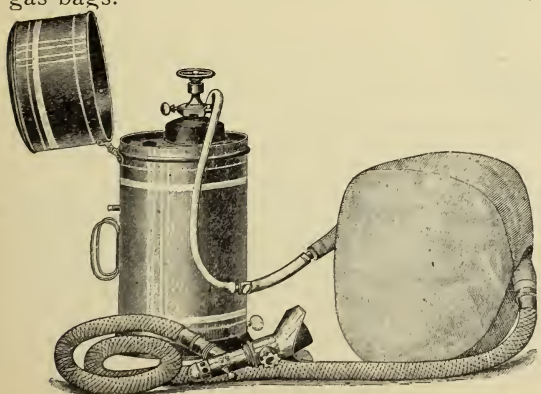
For 100-gallon cylinders only. The cylinder lies on its side. The No. 1 Case has a 4½-gallon bag the No. 2 Case a 7-gallon bag.

PRICES.

No. 1 Case, Complete, with Filled Cylinder.....$32.75
No. 2 Case, Complete, with Filled Cylinder..... 34.00

Upright Surgeon's Case, Cylindrical.

The case is of metal, handsomely japanned. Size 16½x7 inches. Made only for 100-gallon cylinders. Nos. 5 and 6 are alike except in the sizes of the gas bags.



PRICES.

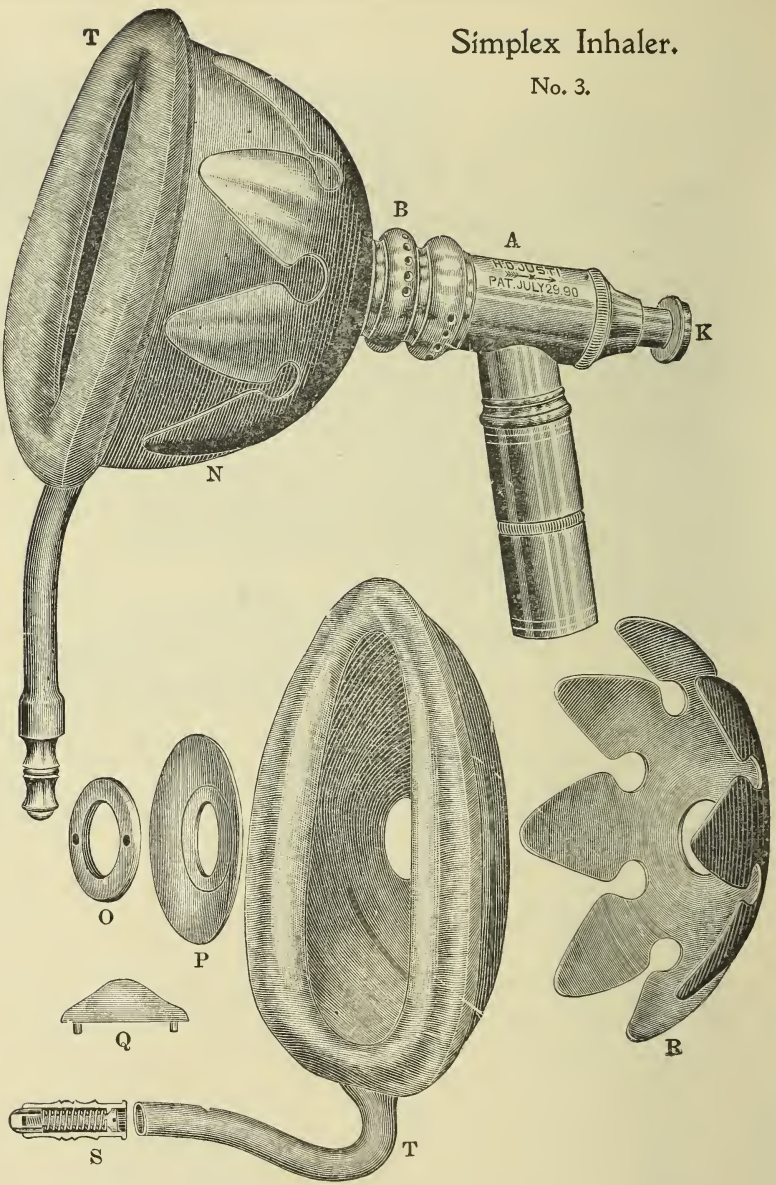
No. 5, Complete Apparatus, with 4½-gallon Bag, in Stout Metal Case, handsomely japanned $27.75
No. 6, the same, with 7-gallon Bag 29.00

Oxygen and Nitrous Oxide Apparatus.

Complete, with two small Cylinders, filled respectively with Nitrous Oxide and Oxygen $67.00
Same, less Cylinders and Gas 50.00

Simplex Inhaler.

No. 3.



No. 3. Simplex Inhaler, nickel-plated, with inflatable Rubber hood, complete..... $ 8 00
Face-piece and fittings..... 4 00
Inflatable Hood..... 2 00
Valve for same..... 50

The upper illustration shows the inhaler complete, with the hood inflated, and the lower one the various parts detached. "T" is the hood with the inflatable rim in its normal condition when not filled with air, and "O" the nut which secures it firmly to the tube "A." "P" is a thin metal washer to prevent the nut from injuring the hood when attaching, and "R" is a neat metal frame to stiffen the same so that it will conform to the face of the patient. "Q" is a wrench which fits the nut "O" so that it may be readily taken apart to be cleaned when necessary. The valve "S" is entirely automatic in its action and by pressing the valve stem lightly against the teeth the valve is opened and when the hood is inflated it closes instantly by removing it. By simply pressing the valve stem with the finger the air is released.

The inhaler will be furnished as heretofore with either the metallic mouth-hood and hard rubber mouth-piece, the flexible rubber hood or the inflatable rubber hood, but when ordered with the metalic mouth-piece it will be furnished as in the original with the long tube "A," as it makes it more convenient for the operator. For convenience in ordering they are numbered.

H. D. JUSTI & SON.

The Simplex Inhaler. No. 1.

Patented July 29th, 1890.

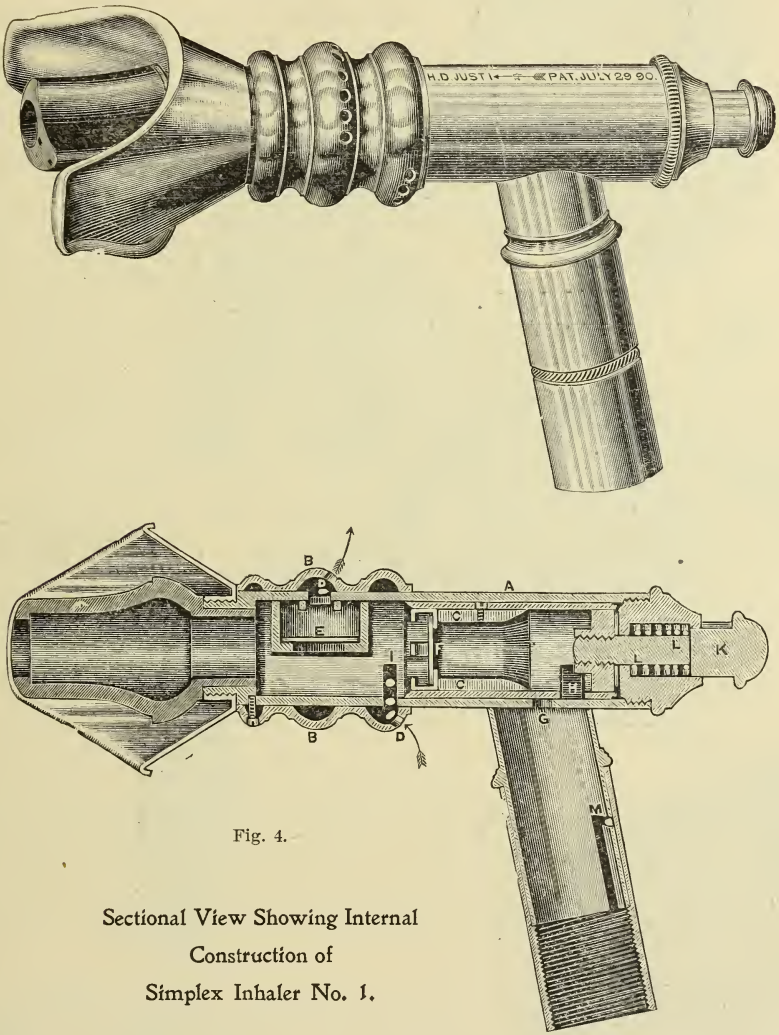


Fig. 4.

Sectional View Showing Internal Construction of Simplex Inhaler No. 1.

This inhaler is offered to the profession as being the neatest and cleanest automatic inhaler in use. It has no valves on the outside to mar the finish and collect dust or dirt, and is made with as few parts as possible, thereby reducing the liability to disarrangement to a minimum. The valves are made of thin hard rubber and will not scale like mica when brought in contact with moisture from the breath.

The internal construction is shown in the sectional cut (fig. 4). The body A is of a single tube and contains a sliding tube having an opening H. When pressed forward by the thumb-piece K and rod L a communication is made through G to the gasometer and the opening I is closed to the air, which is admitted through the holes D in the ring B, as indicated by the arrow.

The inhaling valve F and its seat CC are inserted in the sliding tube and are removed with it when taken apart for cleaning, which is simply done by unscrewing the end in the tube containing the parts K and L. The spring around the rod L keeps the gas inlets G and H closed when not in use.

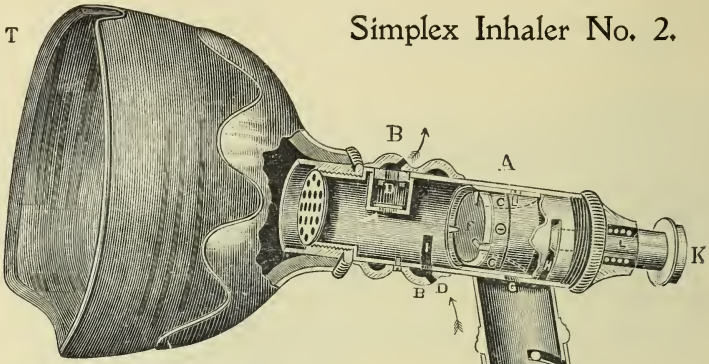
The exhaling valve is attached to the inner surface of the tube A and has an opening D through the ring B, as indicated by the arrow. The holes in the ring B are made at an angle of about 45°, thereby preventing any disagreeable exhalations being driven into the face of the patient.

The rubber tube from the gasometer is attached by the thread shown and is made perfectly secure by the bayonet joint M, which is quickly removed when necessary. The inhaler is finely polished and nickel-plated and is furnished as illustrated or with the flexible or inflated soft rubber hoods.

Inhaler, nickel-plated with Metallic Mouth Hood, price.....$8 00

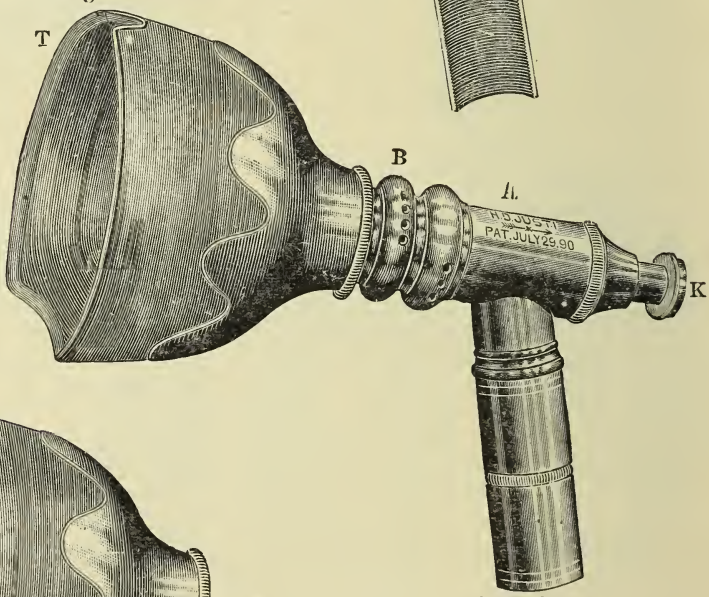
Manufactured and for sale by H. D. JUSTI & SON

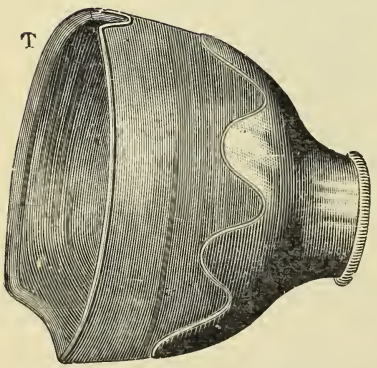
Simplex Inhaler No. 2.



SECTIONAL VIEW.

Showing interior construction of Simplex Inhaler Nos. 2 and 3.





PRICES.

No. 2. Simplex Inhaler, nickel-plated with flexible Rubber Hood, complete..$8.00
Face-Piece and Fittings 2.00
Flexible Rubber Hood..... 1.00

Nitrate of Ammonia (Fused.)

We handle only a warranted pure article, that is made specially for our use. If kept in a dry,cool place it will give satisfaction. It is affected by dampness or heat.

In 25 and 50-lb. boxes, lots over 50 lbs.....per lb $0.20
In 25 and 50-lb .boxes, lots 50 lbs. or less..... " .21
In 5, 10 and 25-lb. boxes, lots over 50 lbs..... " .21
In 5, 10 and 25-lb. boxes, lots of 50 lbs. or less..... " .22

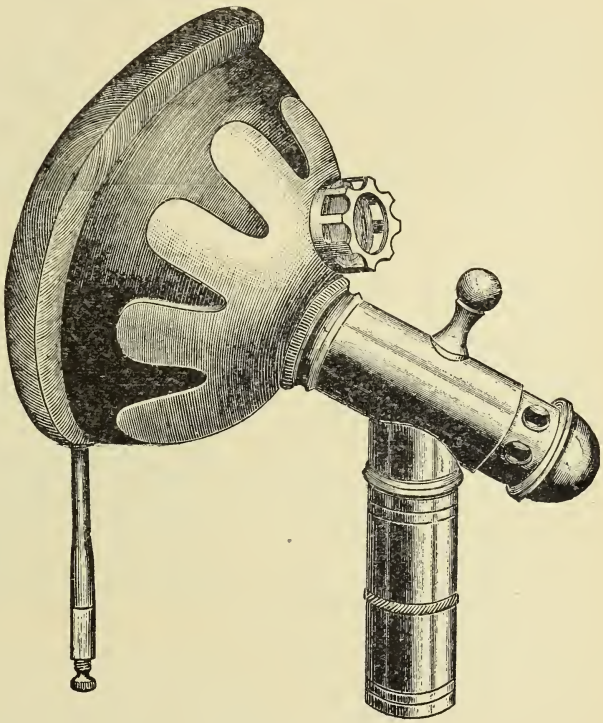
Prices subject to fluctuation.

No. 3 Inhaler.

This Inhaler is almost entirely automatic in its action. It requires the use of but one hand, the inlet valve being opened by a slight pressure of the thumb. The gas can be turned on without the patient's knowledge. Upon the removal of the pressure the valve closes automatically and shuts off the gas.

The entire Inhaler, as shown here, except the hood and the two valve-disks, is of metal, smoothly finished, the outside polished and nickel-plated. It is readily taken apart for cleaning. The illustration is half size.

We supply this Inhaler with either the Metal, Flexible Rubber, or Inflatable Rubber Face-piece, as shown, at the same price.



Price $8.00

Flexible Face-Piece and Fittings only	$2.00
Flexible Face-Piece (Rubber Portion Only)	1.00
Inflatable Face-Piece, with all parts for adapting to No. 3 Inhaler	4.50
Valve for Inflatable Face-Piece	.50
Inflatable Face-Piece (Rubber Portion Only)	2.00

Rubber Aprons.

These Rubber Aprons can be put on and taken off almost instantaneously. They are large enough to afford ample protection to the clothing of the operator or patient, not big enough to interfere with freedom of movement. The dimensions are 43 inches long and 34 inches wide at the middle line.

Made of rubber cloth, and nicely finished, with the edges bound.

Price .....each $0.75

Complete Outfits with Dr. G. H. Hurd's Chloroform Mixer or Vitalized Air Cup Attachment.

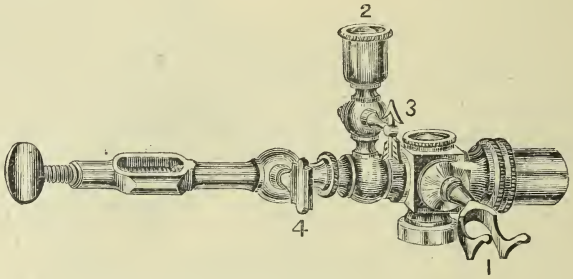


Fig. 1.—Holder for Inhaler when not in use.
Fig. 2.—Reservoir for Chloroform Mixture.
Fig. 3.—Stop Cock with chamber holding four drops of the fluid mixture, which is received from the Reservoir. This is shown in cut in shape of an arrow, the spear part pointing upward: in this position the chamber is filled. Turn the Stop Cock one-half revolution (spear pointing downward) and the mixture will discharge into the enlargement of the gas passage. The gas must be turned on simultaneously with the discharge of the fluid, which vaporizes the mixture while passing into the gas bag.
Fig. 4.—Stop Cock for shutting off the gas. This is an extra precaution against the carelessness of the operator in not closing the cylinder valve, otherwise, in case of leakage, the gas would pass into the bag and burst it.

PRICES.

Dr. Hurd's Chloroform Mixer, Union and Extension	$7.00
Union and Extension	5.00

Dr. Hurd's Chloroform Mixer will be included with outfits for an additional price of $6.00.

Old Style Gas Apparatus and Parts.

We have complete outfits for dentists who prefer to make their own gas. Prices are as follows:

Old Style Gas Apparatus and Parts.

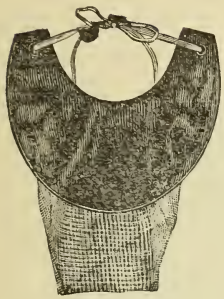
Gasometers made to order only.		
Retorts, Bohemian, with Rubber Stopper	each,	$1.25
Retorts, Bohemian, without Rubber Stopper	"	1.15
Retorts, Long Neck, 1 quart	"	.60
Retorts, Long Neck, ½-gallon	"	.75
Retorts, Florence Flasks, without Stopper or Tube	"	.75
Retorts, Florence Flasks, with Stopper and Tube	"	1.40
Retort-Holders	"	2.50
Rubber Stopper for Bohemian Retorts	"	.10
Rubber Stopper for Florence Flasks (one hole)	"	.50
Rubber Stopper for Wash Bottles (two holes)	"	.50
Tubes for Wash Bottles, long	"	.25
Tubes for Wash Bottles, short	"	.15
Wash-Bottles	"	1.00
Wash Bottles with Rubber Stopper and Two Tubes	"	1.75

Rowan's Iron Retort.

This is an iron retort, porcelain lined. It can't break. It will last indefinitely.

PRICES.

Plain, complete with 2 Rubber Stoppers and Glass Tube	$ 9.00
Nickel-dipped, complete with 2 Rubber Stoppers and Glass Tube	11.50



Horton's Dental Apron or Bib.

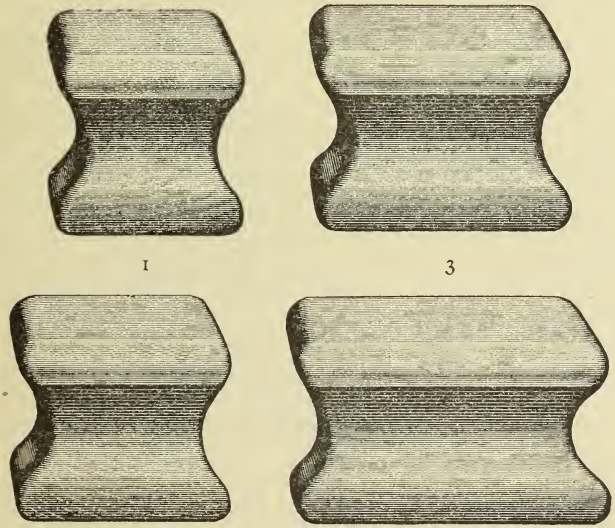
Designed and Patented by R. Horton, D.D.S.

Where there is a copious flow of saliva this Bib becomes a necessity. It is so shaped as to catch and retain all overflow. The Bib is readily attached by passing the tape over the head and tying.

Made of checkered rubber cloth, mounted on a wire frame.

Price $0.75

Soft Rubber Bite-Blocks.



Being elastic, they cannot injure the frailest tooth by being bitten upon.

Their resilience will open the jaws, if partially closed, as soon as muscular relaxation takes place.

Being grooved, they cannot fall into the mouth or be pressed out of place by the tongue.

They are too large to pass back into the pharynx or be swallowed, and they cannot be broken or injured by biting.

They do not need to have a string attached to them, and are readily removed with a crooked finger.

Each block can be set at two heights, and can be placed at any point between the jaws without likelihood of slipping.

Price, each ..... 25c.

Daintree's Adjustable Mouth Prop.

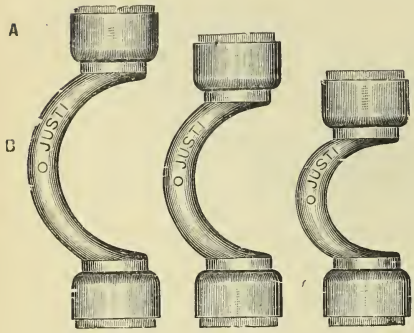
This Mouth Prop combines facility of lengthwise adjustment to suit the "open" of the jaws with a spring which affords the necessary elasticity. With the spring compressed the length at the shortest adjustment is 1 3-16 inches; at the longest, 1½ inches. One head screws into the body, around which the other swivels, an elastic spring being confined between the swiveling-head and the body. The heads are cushioned with cork, and there is a ring for the attachment of a retaining cord.

Price, nickel-plated ..... 75 cents.

Nevius' Reversible Mouth Props.

Made by H. D. Justi & Son.

Patented May 22, 1883.



These Mouth Props are made of nickeled brass, with cork tips.

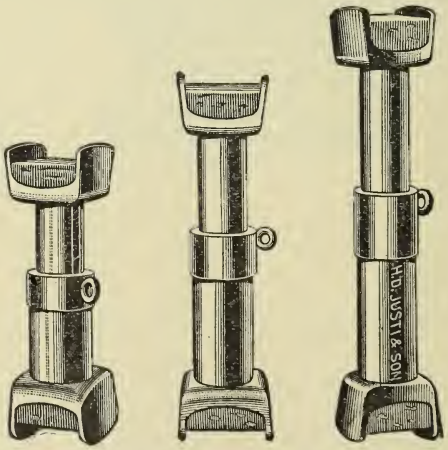
A is the cup into which the tips are neatly fitted.

B is the reversible standard, on either end of which the cups A are swiveled.

The standard may be reversed from right to left or from left to right, as the case may require, while the brace is still retained firmly between the teeth, thus enabling the operator to extract he lower molars on both sides of the jaw, while he patient is under one influence of the gas. If the greater number of teeth, or the most difficult ones to extract, are on the right side of the jaw, place the prop between the incisors, with the curve to the left, before administering the gas, or vice versa. As soon as the teeth on the right side are removed, reverse the standard with the thumb and forefinger of the left hand to the right side of the mouth, and proceed to extract the left molars. By the use of this prop the mouth is not only kept open, but plenty of room is given and a better opportunity afforded to extract on both sides of the jaw than with any other prop that can be used. They are made in sets of three, differing only in length.

Price: $1.00 each; or, $2.50 for the set.

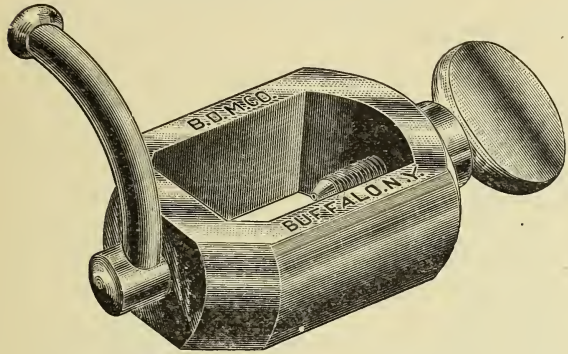
Bickford's Mouth Props.



This well known Mouth Prop is provided with a spring inside to give it elasticity; the heads have cork cushions; the ring outside is intended for a retaining cord.

Price, per set of 3 ..... $2.50
Price, each 1.00

B. D. M. Co.'s Yoke.



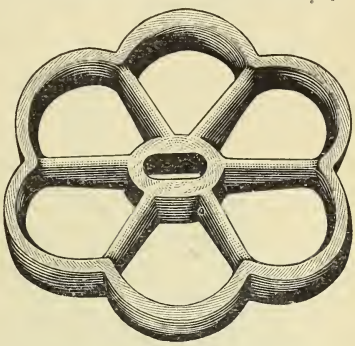
FOR MAKING CONNECTION TO GAS CYLINDERS.

Made very heavy and strong, handsomely finished and nickel-plated.

PRICE.

B. D. M. Co.'s Yoke $1.50

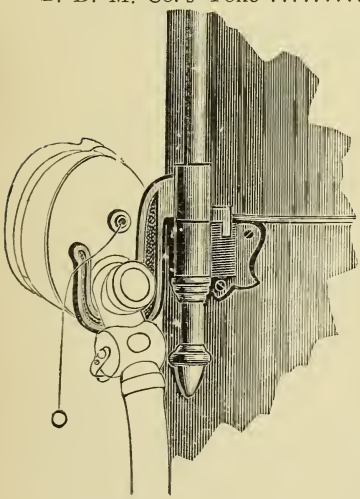
B. D. M. Co.'s Wheel Key.



FOR OPENING THE VALVES OF NITROUS OXIDE CYLINDERS.

This key is 2¾ inches in diameter, larger than those usually sold for the purpose, and the irregular shape of its edge affords a strong grip for the hand.

Price, B. D. M. Co.'s Wheel Key.....25c



Lewis Inhaler Support.

FOR ATTACHMENT TO LEWIS GASOMETER.

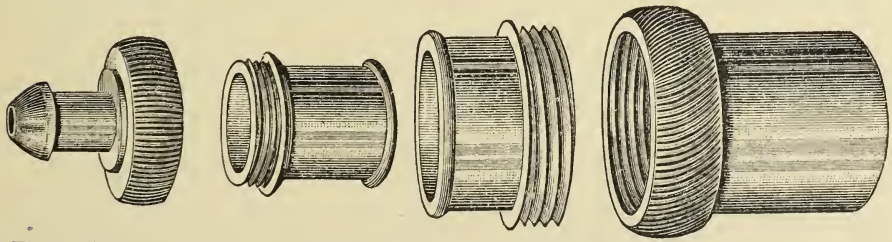
The engraving illustrates a support to be slipped on one of the upright guide rods of the Lewis Gasometer, for holding the Mouth-piece or Inhaler when not in use. The support will hold any Inhaler in the market, and can be attached to any gasometer of our manufacture. It will be found a great convenience.

PRICE.

Lewis Inhaler Support, nickel-plated 50c

Metal Connections for Gas Bags.

Fig. 1. Fig. 2. Fig. 3. Fig. 4.



The tubing and bag are joined by metallic screw-connections, as shown above. By their use any one can attach either tubing or bag when necessary.

DIRECTIONS.

Figs. 1 and 2 connect the small end of the bag to the rubber tubing.

Figs. 3 and 4 connect the large end of bag to the covered tubing.

Insert Fig. 1 in the rubber tubing, and screw Fig. 4 over the covered tubing.

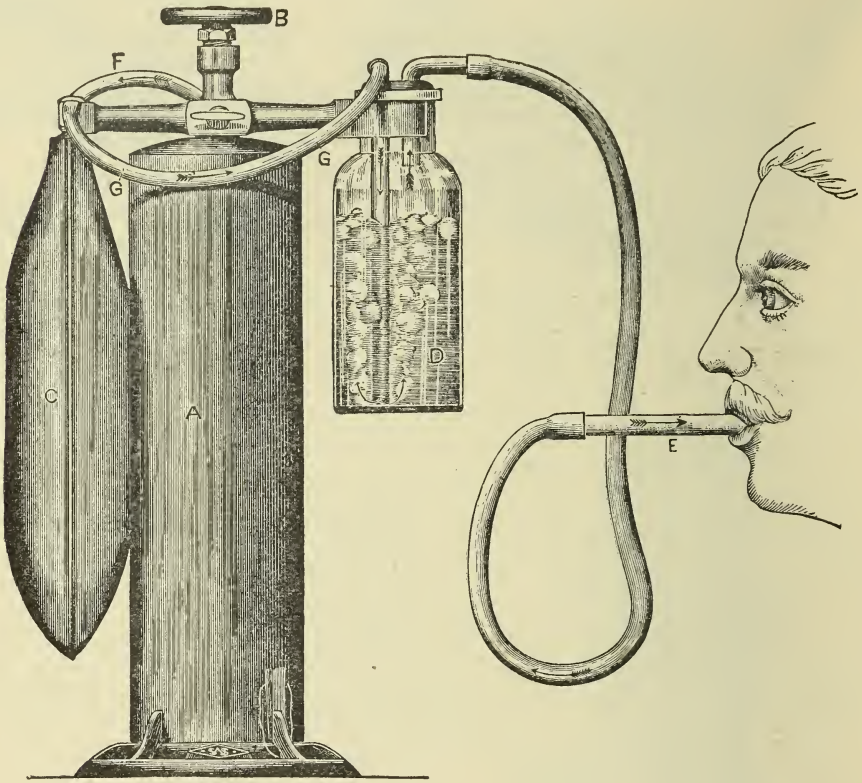
In inserting Figs. 2 and 3, bind with copper wire or good strong twine, which may be neatly covered with material corresponding in appearance to that of the bag.

The parts must be screwed together until firmly seated on the leather washers.

Price, per set 50c

Pure Oxygen and Apparatus for its Therapeutic Administration.

Made by The S. S. White Dental Mfg. Co.



INHALATION APPARATUS.

Both in Apparatus for Inhalation and Enema, the administration of the gas is absolutely under control of the operator.

Pamphlets fully describing methods of use, etc., cheerfully mailed upon application.

PRICES.

Inhalation Apparatus	$ 5.00
Small Cylinder, 40 gallons capacity	6.00
40 gals. Gas, pure Oxygen or mixed Oxygen and Nitrous Oxid	2.00
Complete Apparatus, Cylinder, and foot-piece, and 40 gallons Gas.	$13.00
Inhalation Apparatus	$ 5.00
Medium Cylinder, 75 gallons' capacity	10.00
75 gallons Gas, either pure or mixed	3.75
Complete Apparatus, Cylinder, 75 gallons Gas, and foot-piece	$18.75
Inhalation Apparatus	$ 5.00
Large Cylinder, 100 gallons capacity	12.00
100 gallons Gas, either pure or mixed	5.00
Complete Apparatus, Cylinder, and 100 gallons Gas	$22.00
Oxygen Gas Bags	1.00
Oxygen Gas, per gallon	.05

Extracting Forceps.

Our name on a forcep is a guarantee of quality. It is a guarantee that if any forcep should prove soft in use or should be broken and show a flaw in the metal it will be exchanged for a new one without charge.

We don't know how anybody could make a broader guarantee than that.

There are forceps that sell for more money than ours, but they are not any better forceps. They are not finished any better and they couldn't be backed by a stronger guarantee.

We have three complete stocks of forceps. We have a full line of our own and Claudius Ash & Sons, as well as the S. S. White Dental Mfg. Co.'s.

We can never, by any possible chance, receive an order for forceps that we can't fill from our stock.

The patterns of White's and our own are identical.

Our Own Brand.

PRICES.

All numbers except those noted below	$2 00
Nos. 66, 67, 85, 86	2 25
Nos. 88 R. 88 L.	2 50

Claudius Ash & Sons.

All numbers	$3 00

S. S. White D. M. Co.'s.

All numbers except those noted below	$2 50
Nos. 29, 30, 62	2 25
Nos. 66, 67, 85, 86	3 00
Nos. 88 R, 88 L	3 25
The Common Sense Forceps, except No. 286	3 00
The Common Sense Forceps, No. 286	3.50

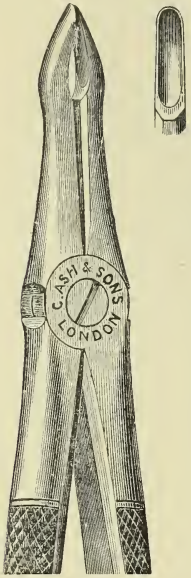
To simplify reference to our list of forceps we append classified list:

Alveolar 436-439
Ash & Sons 428-431
Bicuspid 441-443
Children's 453
Common-Sense 456-459
Crowded Teeth 439-440
Cuspid 440-441
Third Molar 450-451
Excising 452-453
Incisor 440-441
Molar, Upper 444-447
Molar, Lower 447
Root 432-436
Splitting 452-453
Sub-Alveolar, Dr. Tee's..... 454
Watling's, Prof. J. A.....455-456

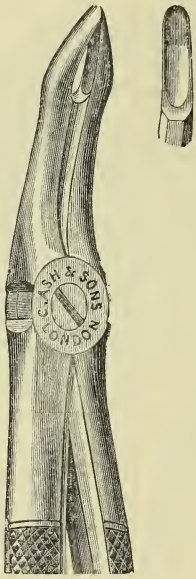
C. Ash & Sons' Hand-Made Forceps.

The cuts on this and succeeding pages show those most in demand by our patrons. We can confidently recommend them for *lightness, strength, temper, finish and accuracy* of adaptation. Ash's complete list forwarded on application.

41.

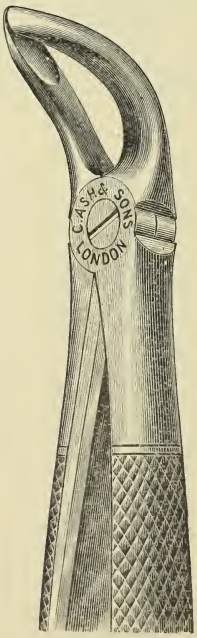


44.

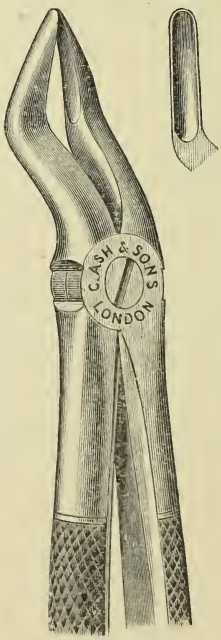


45.

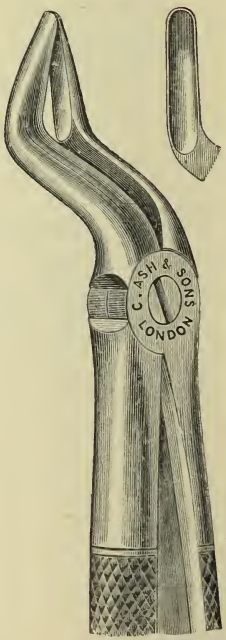
48.



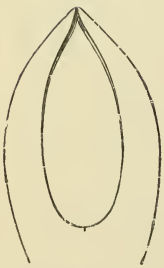
51.



52.



A



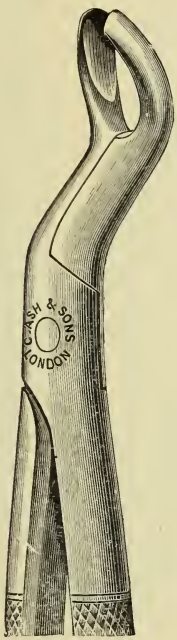
Front View of Beaks.

Price, nickel-plated ..... each, $3.00

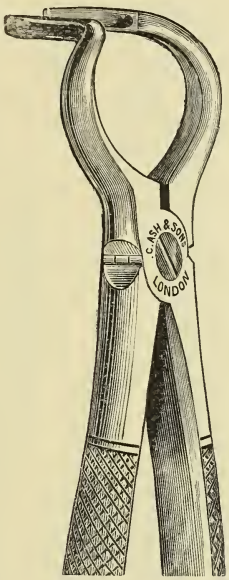
(Full catalogue of all their Forceps on application.)

C. Ash & Sons' Forceps.

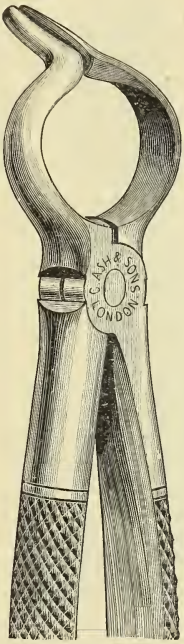
67.



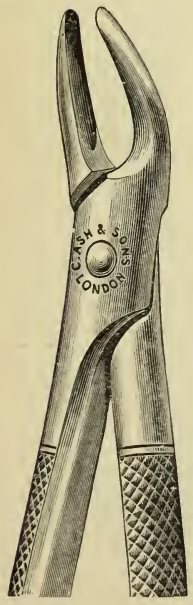
68.



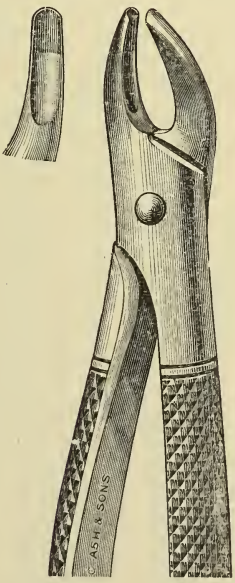
68A



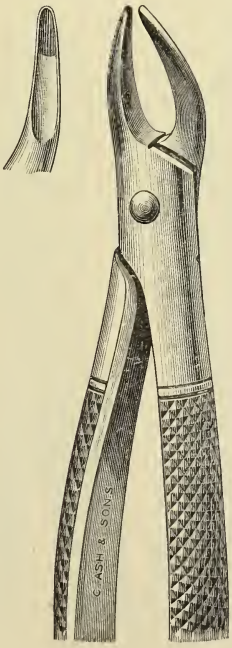
76.



76S.



76N.



This shows the bend of the handles of Figs. 76, 76S and 76N.

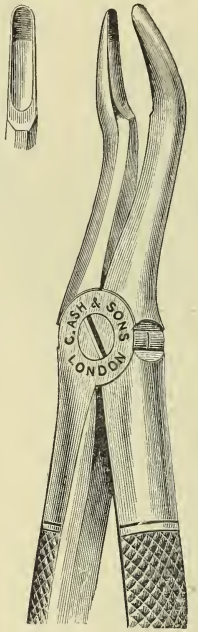
Price, nickel-plated ..... each, $3.00

(Full catalogue of all their Forceps on application.)

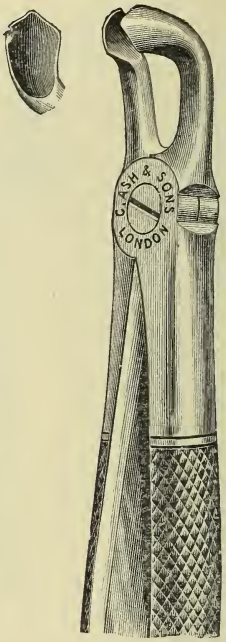
C. Ash & Sons' Forceps.

77.

78.

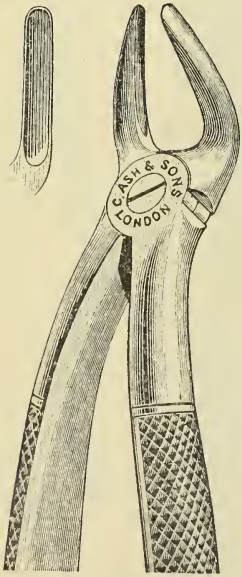


79.



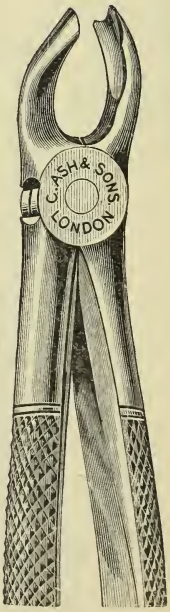
79 (Back View.)

80.



94.

95.



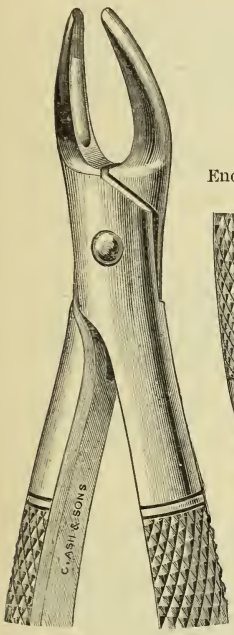
This shows the curve of the handles of Figs. 94, 95, 96 and 97.

Price, nickel-plated ..... each, $3.00

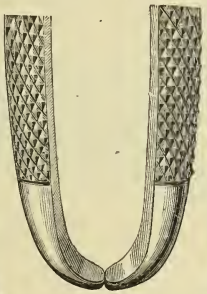
(Full catalogue of all their Forceps on application.)

C. Ash & Sons' Forceps.

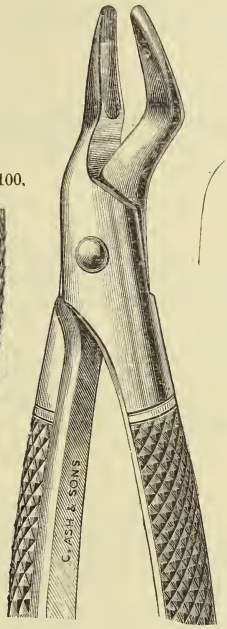
100.



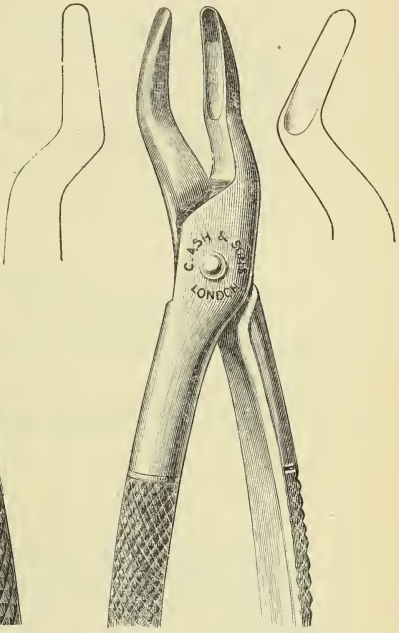
Ends of handles of Fig. 100.



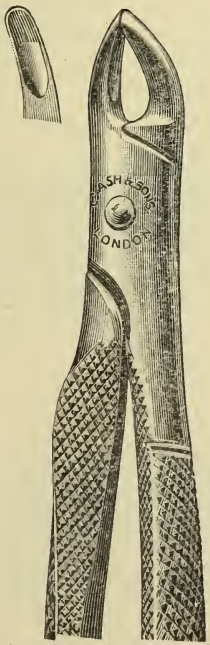
101.



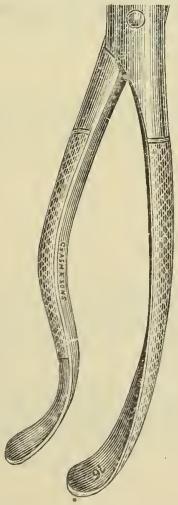
104.



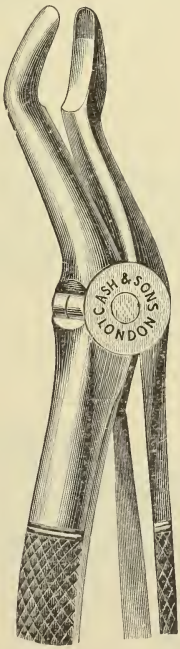
108.



This shows the curve of the handles of Fig. 101, 104 and 108.



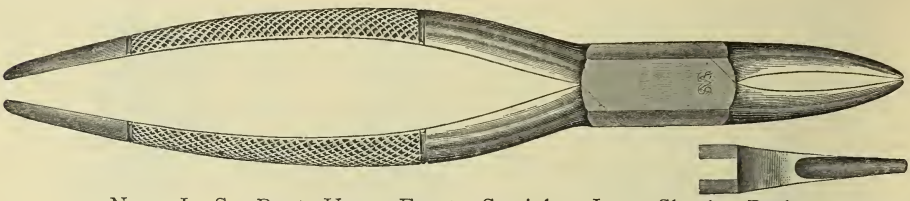
88.



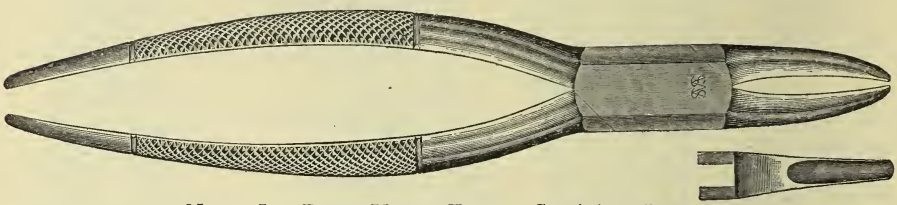
Price, nickel-plated ..... each, $3.00

(Full catalogue of all their Forceps on application.)

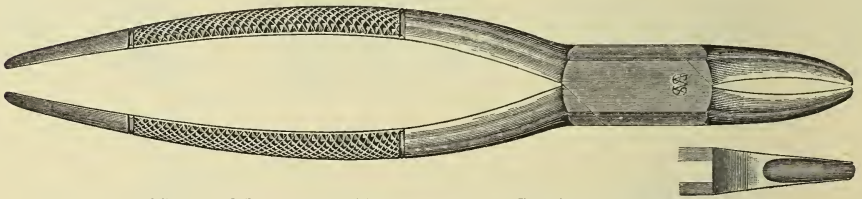
Root Forceps.



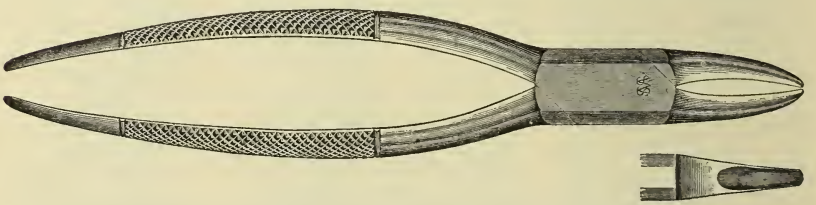
No. 1 L. S. Root, Upper Front. Straight. Long Slender Beaks.



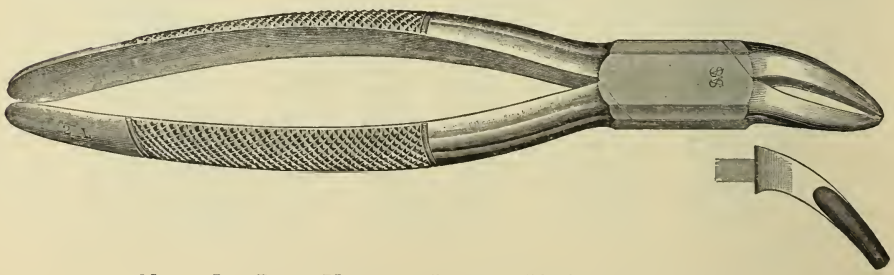
No. 1 L. Root, Upper Front. Straight. Large.



No. 1 M. Root, Upper Front. Straight. Medium.

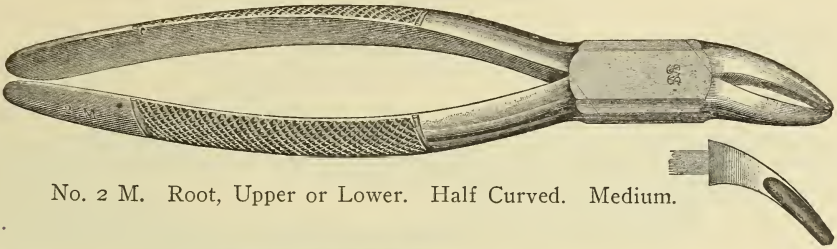


No. 1 S. Root, Upper Front. Straight. Small.

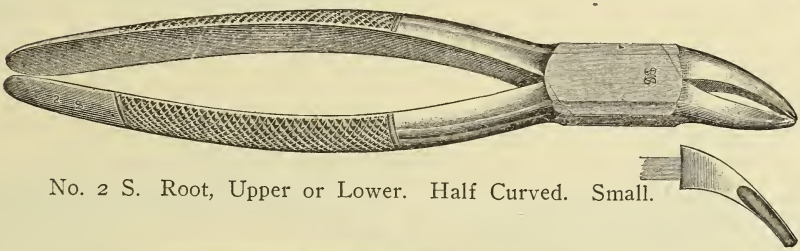


No. 2 L. Root, Upper or Lower. Half Curved. Large.

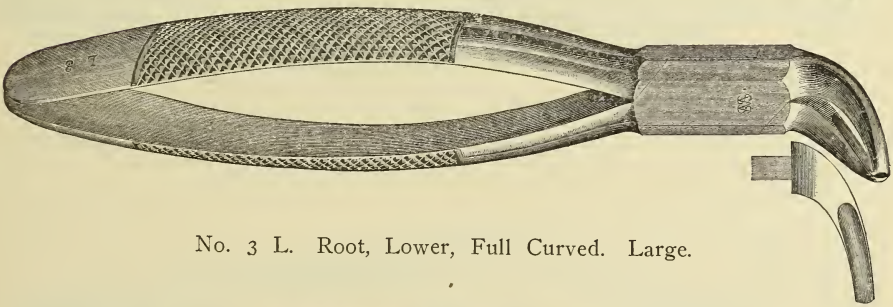
Root Forceps.—Continued.



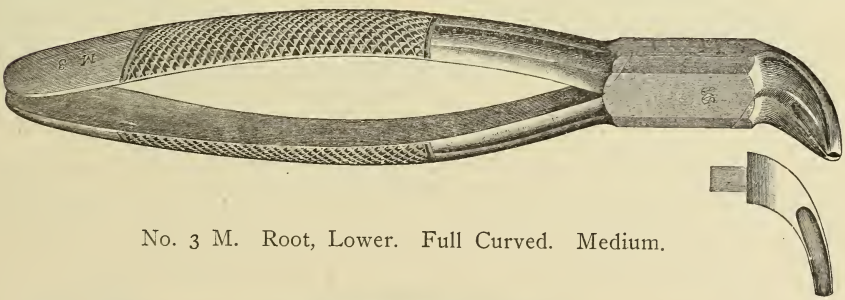
No. 2 M. Root, Upper or Lower. Half Curved. Medium.



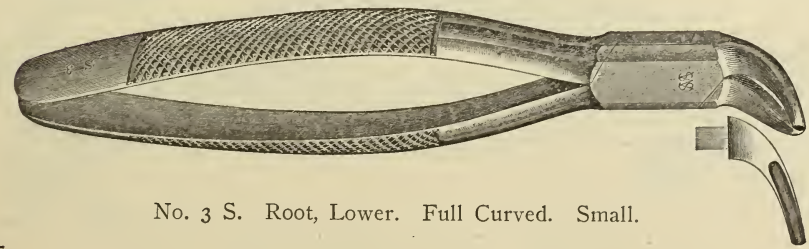
No. 2 S. Root, Upper or Lower. Half Curved. Small.



No. 3 L. Root, Lower, Full Curved. Large.

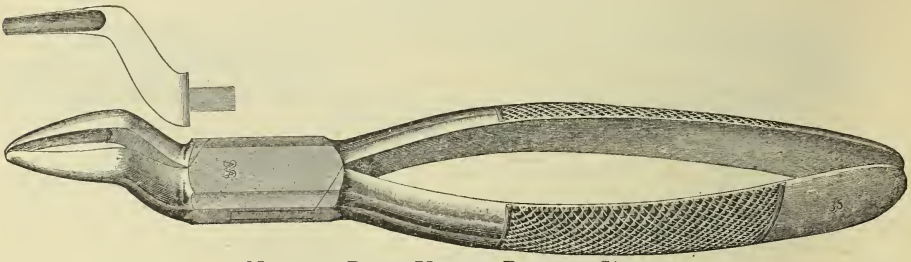


No. 3 M. Root, Lower. Full Curved. Medium.

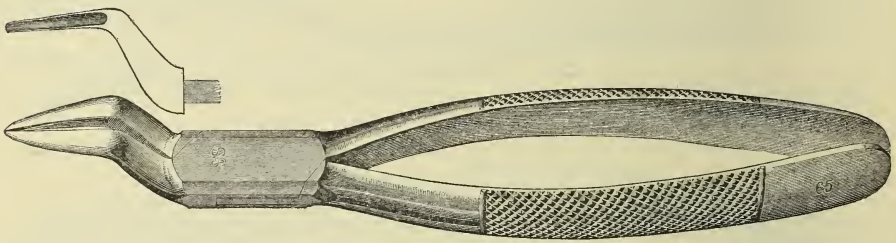


No. 3 S. Root, Lower. Full Curved. Small.

Root Forceps.—Continued.

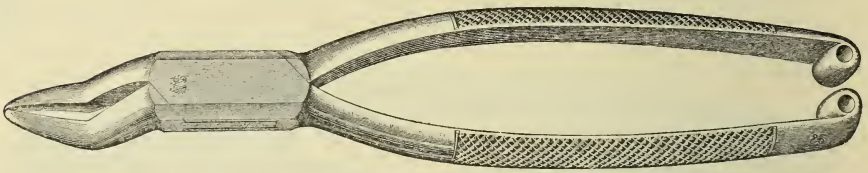


No. 35. Root, Upper. Bayonet Shape.



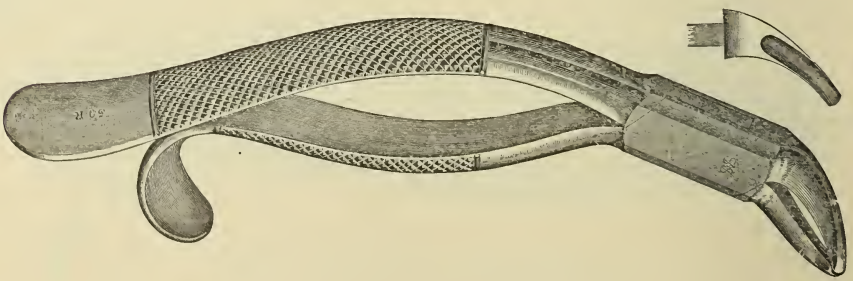
No. 65. Root, Upper. Bayonet Shape. Slender Beaks.

For difficult roots in upper jaw, and roots of front teeth in lower jaw. Designed by Dr. B. F. Arrington.



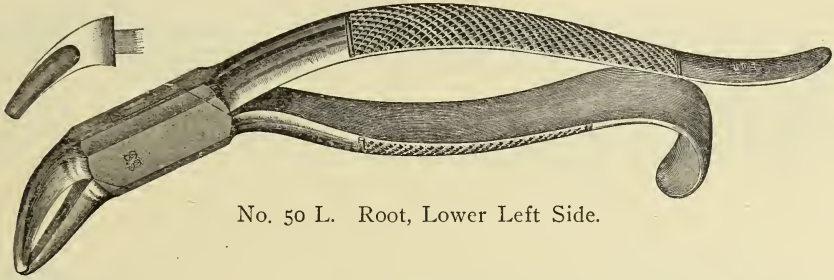
No. 86. Root, Upper. Bayonet Shape.

The ends of the handles are rounded to fit the palm of the hand, so that the beaks can be easily forced between the tooth and the alveolus. Designed by Dr. Henry I. Dorr.

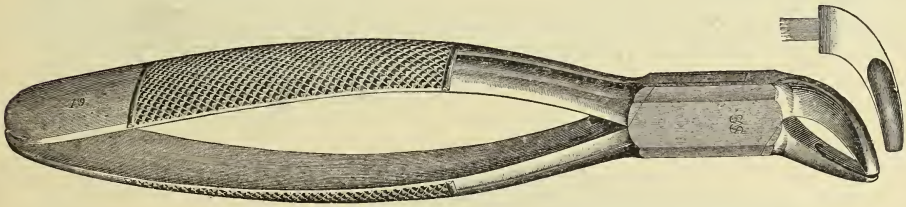


No. 50 R. Root, Lower Right Side.

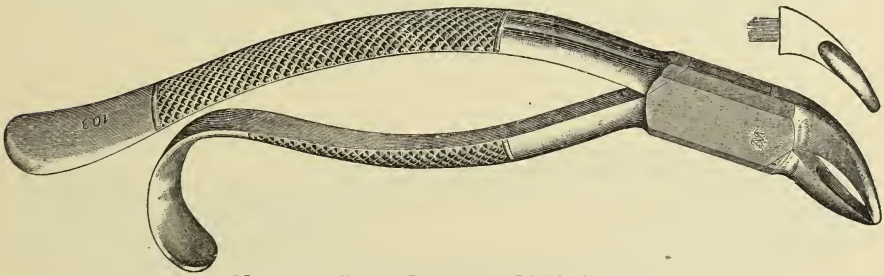
Root Forceps.—Continued.



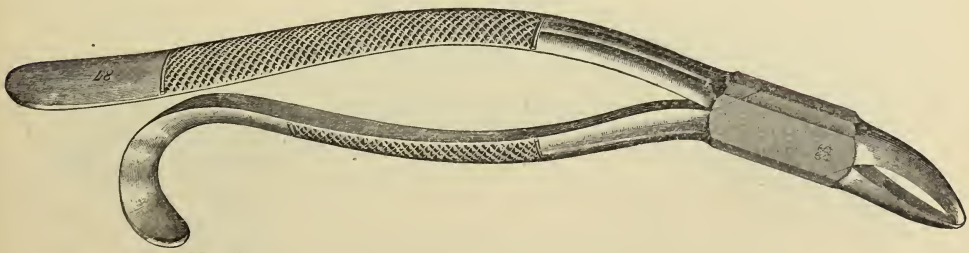
No. 50 L. Root, Lower Left Side.



No. 49. Root, Lower Molar. Either Side.
For extracting lower molars with crowns liable to fracture under direct application of the forceps.

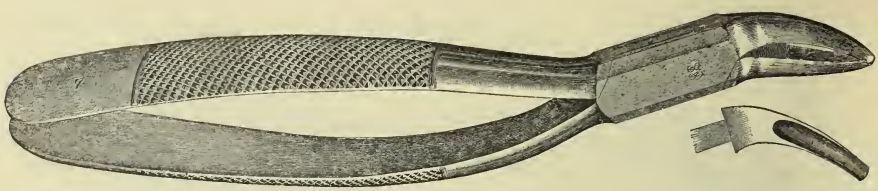


No. 103. Root, Lower. Half Curved.
Resembles No. 50, right side, but has smaller beaks, and greater curve to the handles.

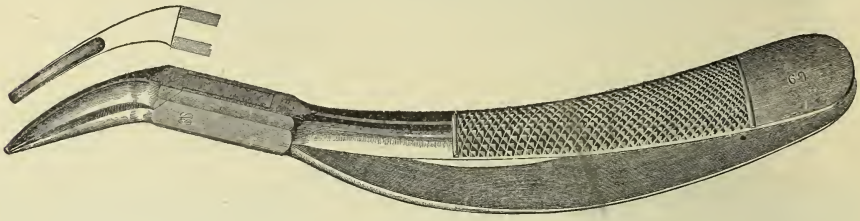


No. 87. Root. Universal. Designed by Dr. J. L. Baker.

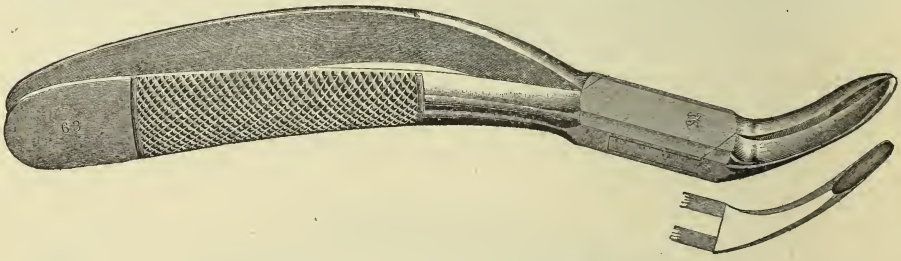
Root Forceps.—Continued.



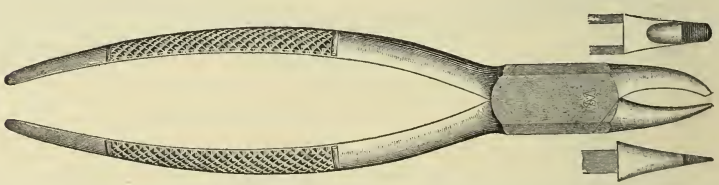
No. 7. Root, Upper Back. Universal.



No. 69. Fragment, or Small Root. Universal. Designed by Mr. Tomes.

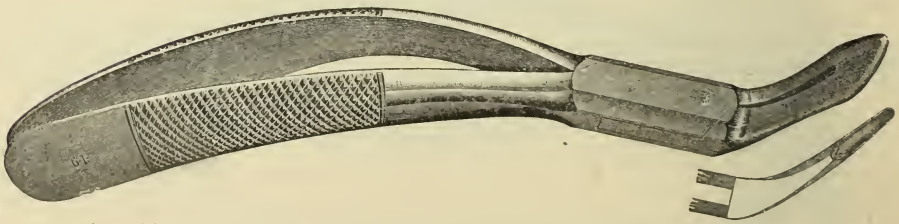


No. 63. Spicula. Universal.



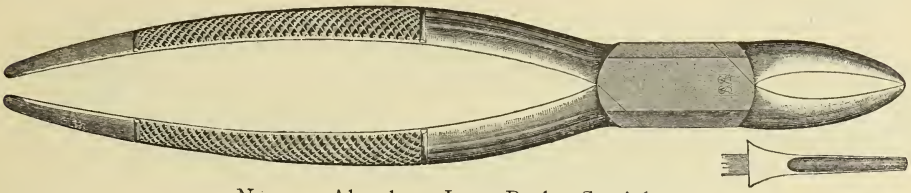
No. 107. For the extraction of roots broken off or decayed at one side under the gum while the other side is in good condition.

Alveolar Forceps.

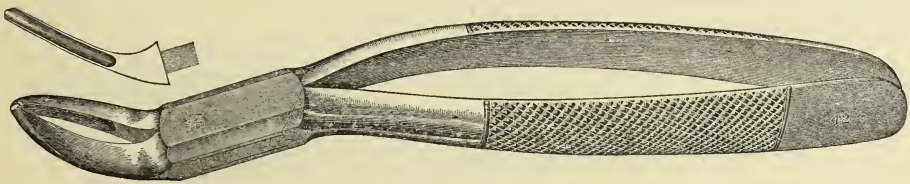


No. 64. Alveolar Cutting, Front. For cutting-away process after extraction.

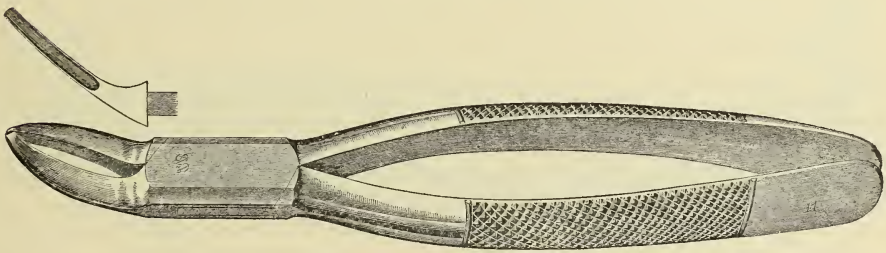
Alveolar Forceps.—Continued.



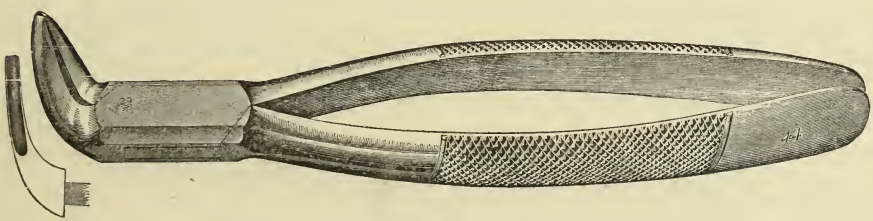
No. 43. Alveolar. Long Beak. Straight.



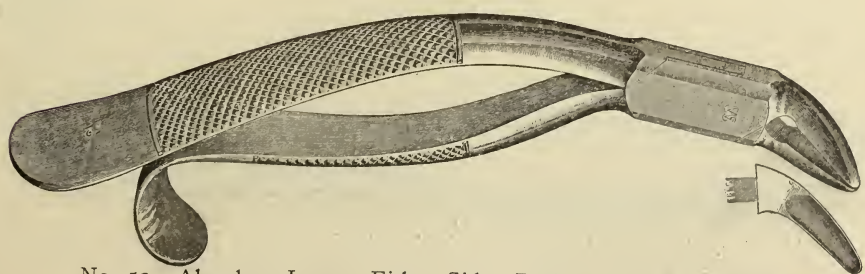
No. 42. Alveolar. Upper Back. Long Beak.



No. 41. Alveolar. Long Beak. Half Curved.

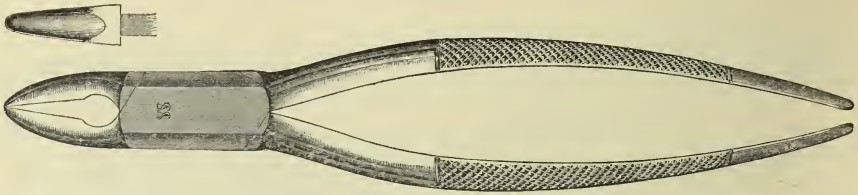


No. 44. Alveolar. Long Beak. Full Curved.

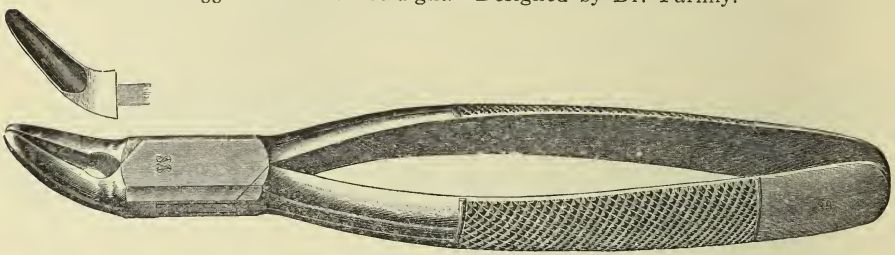


No. 52. Alveolar. Lower, Either Side. Designed by Dr. Parmly.

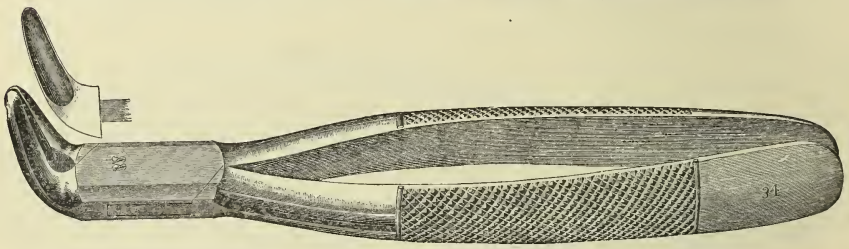
Alveolar Forceps.—Continued.



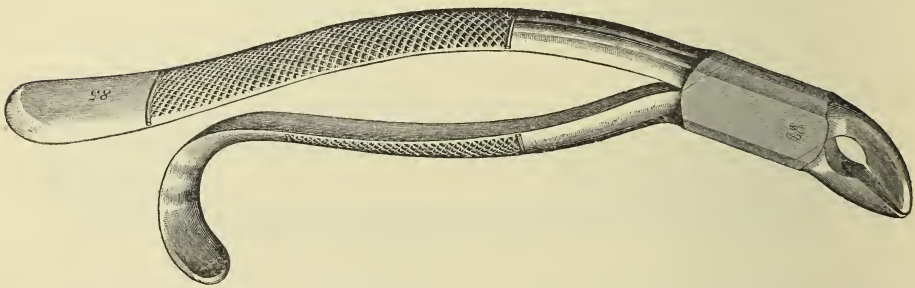
No. 33. Alveolar. Straight. Designed by Dr. Parmly.



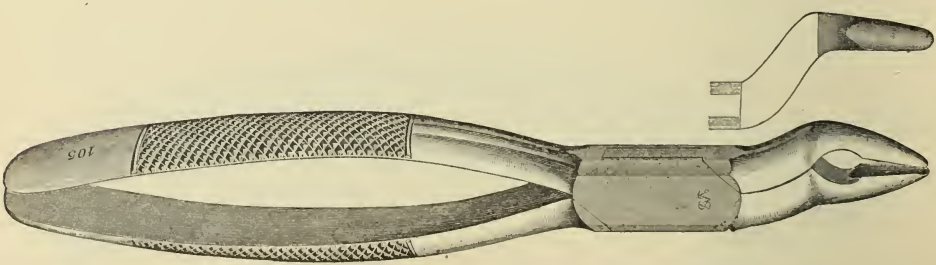
No. 39. Alveolar. Half Curved. Designed by Dr. Parmly.



No. 34. Alveolar. Full Curved. Designed by Dr. Parmly.

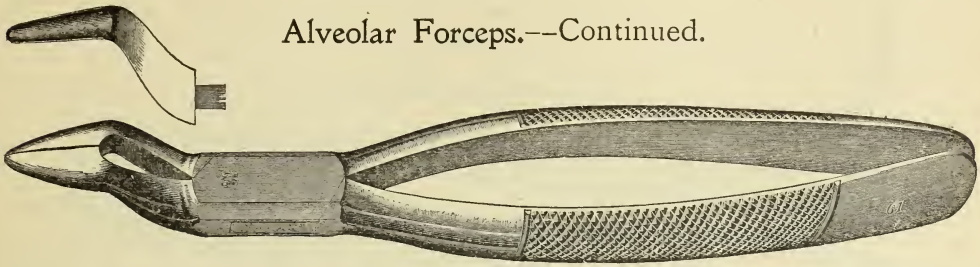


No. 85. Alveolar Root. For Lower Molars and Bicuspids. Designed by Dr. J. D. Thomas.

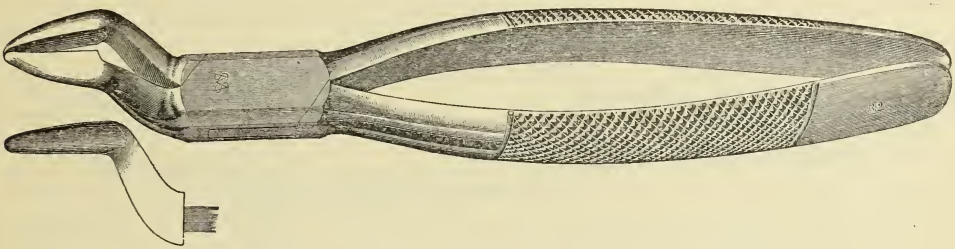


No. 105. Alveolar. Bayonet-shape. With beaks like Dr. Kell's Bicuspid Forceps, smooth all over, without cutting-edges, but with thin points.

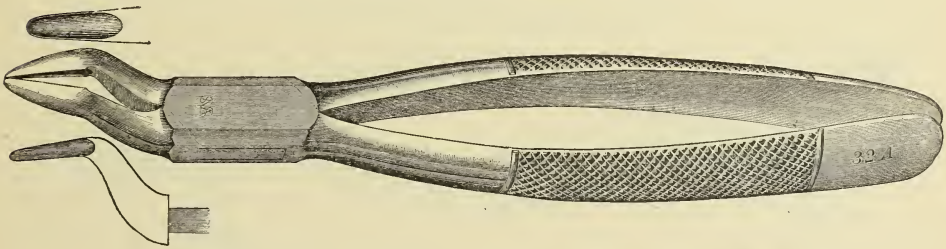
Alveolar Forceps.--Continued.



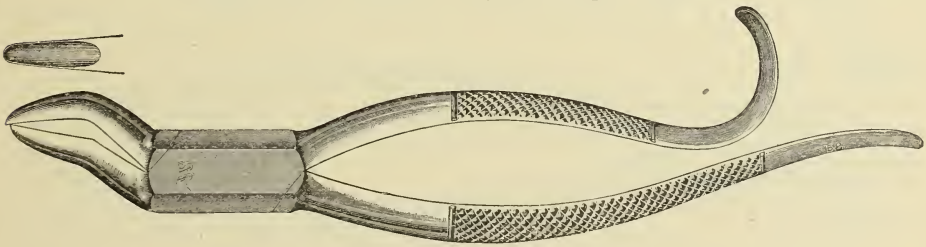
No. 61. Alveolar Cutting Back. Bayonet Shape. For cutting-away process after extraction.



No. 32. Alveolar. Bayonet Shape. Designed by Dr. Parmly.

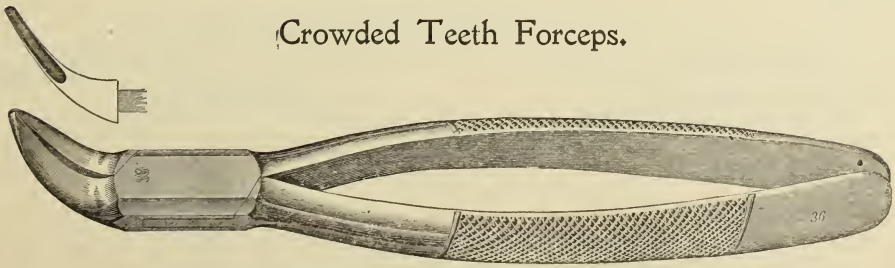


No. 32 A. Alveolar. Bayonet Shape. Small.



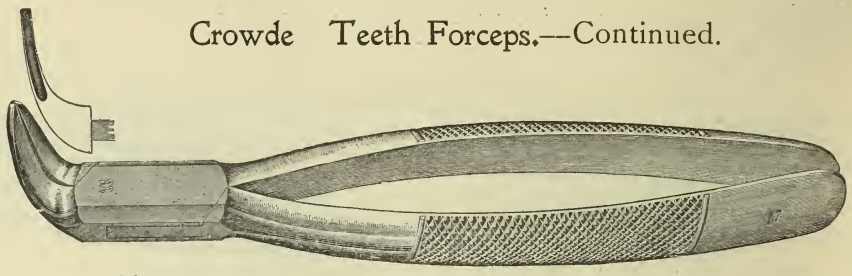
No. 58. Alveolar, Upper Incisor and Cuspid..

Crowded Teeth Forceps.

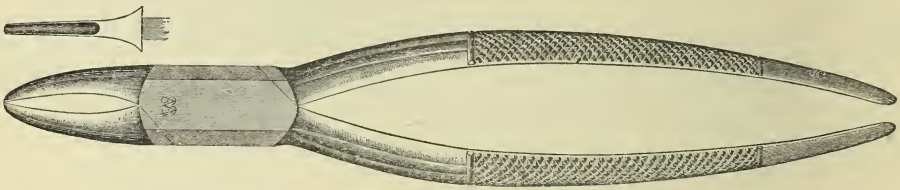


No. 36. Crowded Teeth. Narrow Beaks. Half Curved.

Crowde Teeth Forceps.—Continued.

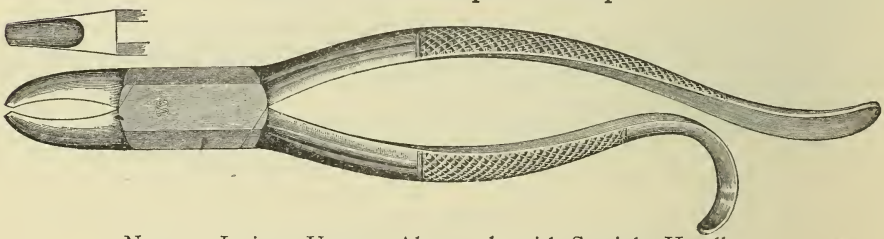


No. 37. Crowded Teeth. Narrow Beaks. Full Curved.

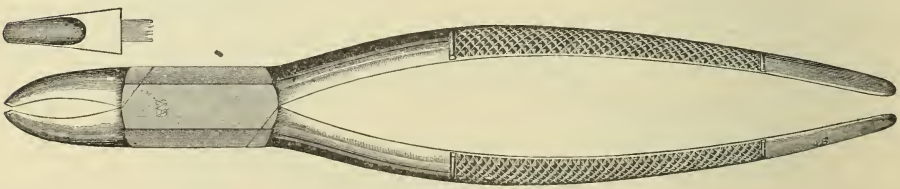


No. 38. Crowded Teeth. Narrow Beaks. Straight.

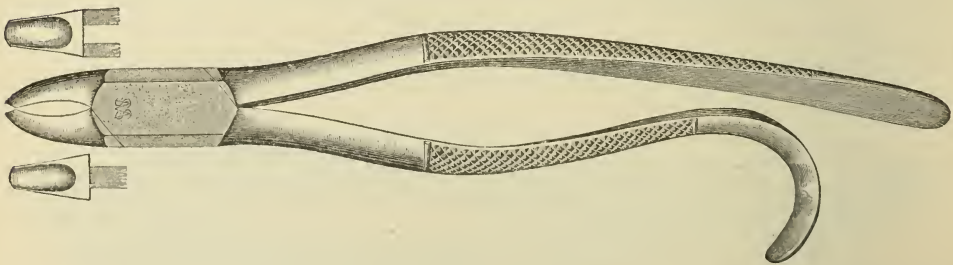
Incisor and Cuspid Forceps.



No. 13. Incisor, Upper. Also made with Straight Handles.

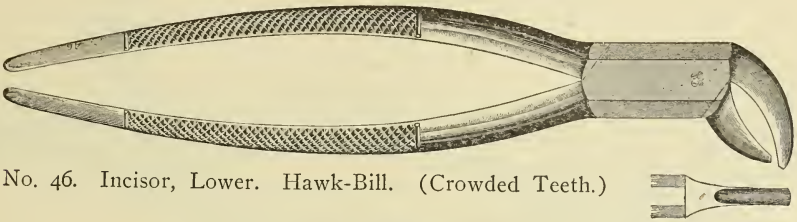


No. 48. Incisor, Upper Lateral.

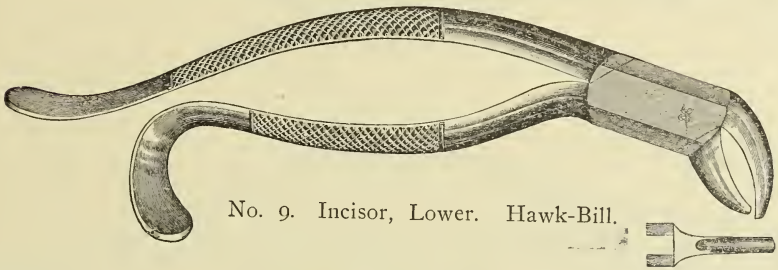


No. 97. Upper Cuspid. Short Beaks. Designed by Dr. James H. Harris.
No. 97 is also made a trifle narrower and shorter in the beaks, and with half-inch longer handles. We designate it as 97 A.

Incisor and Cuspid Forceps.—Continued.

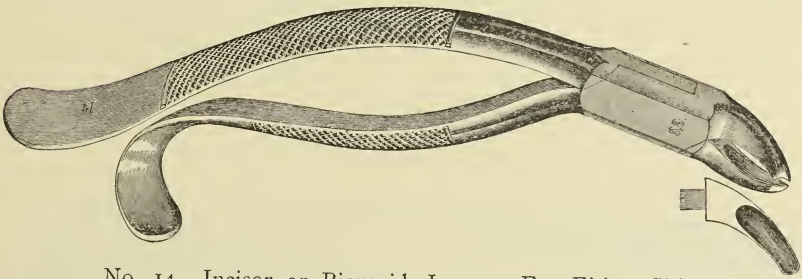


No. 46. Incisor, Lower. Hawk-Bill. (Crowded Teeth.)

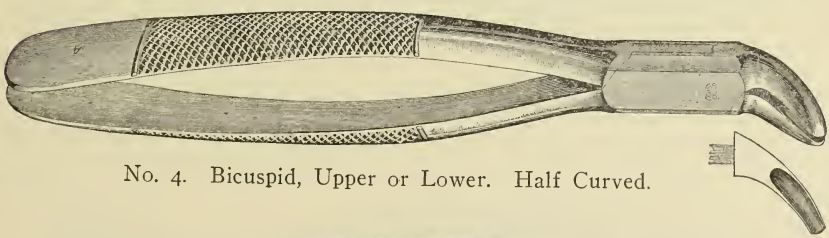


No. 9. Incisor, Lower. Hawk-Bill.

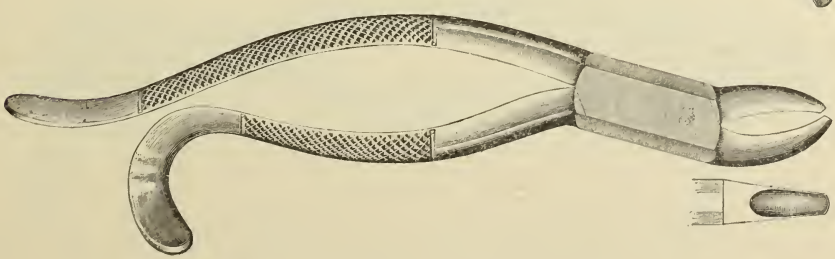
Bicuspid Forceps.



No. 14. Incisor or Bicuspid, Lower. For Either Side.

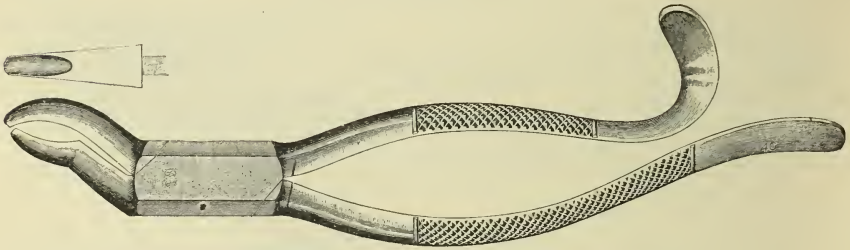


No. 4. Bicuspid, Upper or Lower. Half Curved.

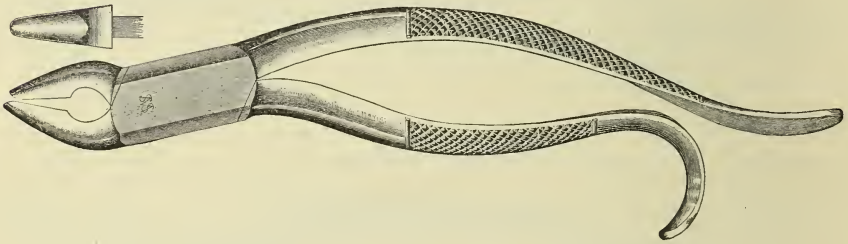


No. 11. Bicuspid or Cuspid, Upper.

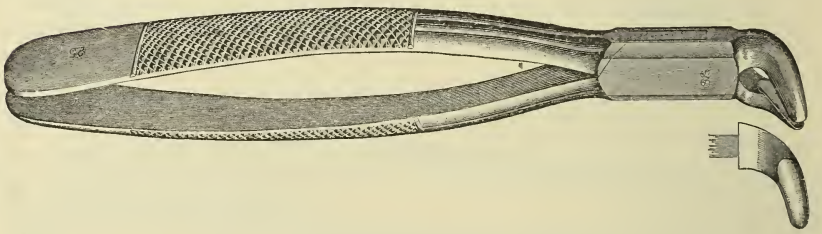
Bicuspid Forceps.—Continued.



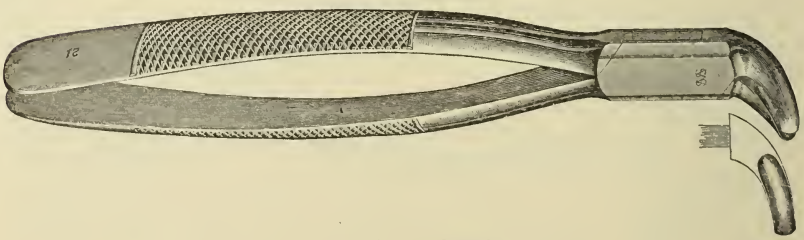
No. 40. Bicuspid or Incisor.



No. 26. Bicuspid, Upper. Safety.

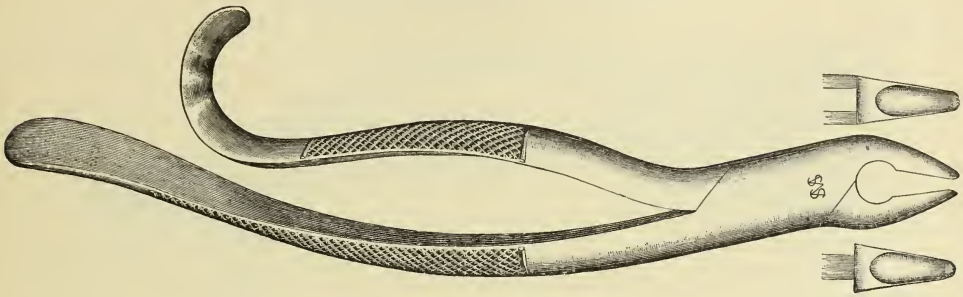


No. 25. Bicuspid, Lower. Safety.



No. 21. Bicuspid or Cuspid, Lower.

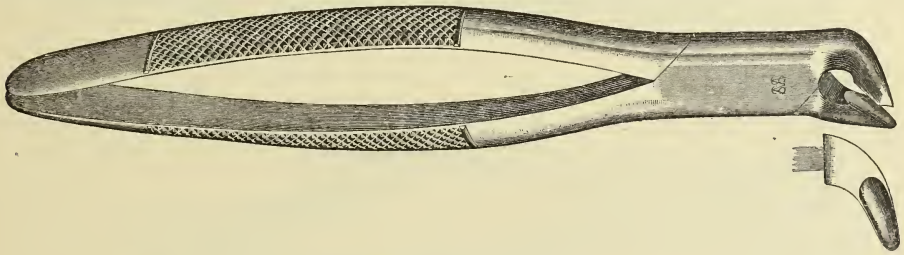
Bicuspid Forceps.—Continued.



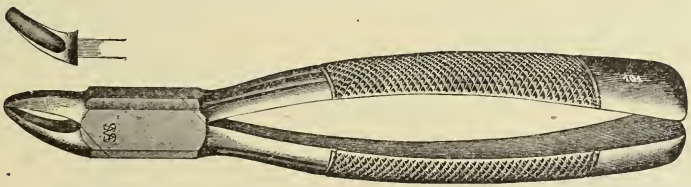
No. 99. Bicuspid, Upper.

Two sizes, A and B, alike in all respects except that the beaks of B are slightly narrower than those of A. Cut shows beaks of A.

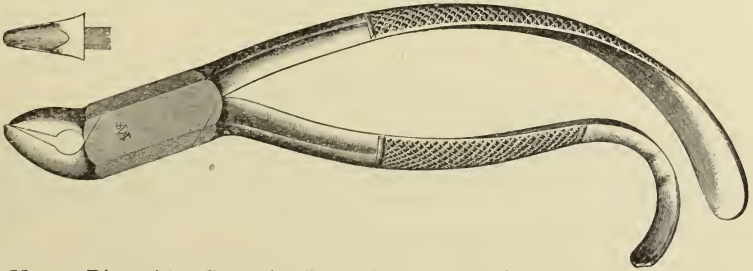
The beaks of these Forceps (Nos. 99 and 100) are very smooth all over, without cutting-edges, but with thin points, the inner surfaces of which are beveled outward slightly. In use the beaks are forced beneath the gum well up onto the root, when the pressure caused by closing the handles lifts the tooth out of its socket. Care must be taken to avoid bringing any leverage upon the delicate points, as otherwise they may chip.



No. 100. Bicuspid, Lower.

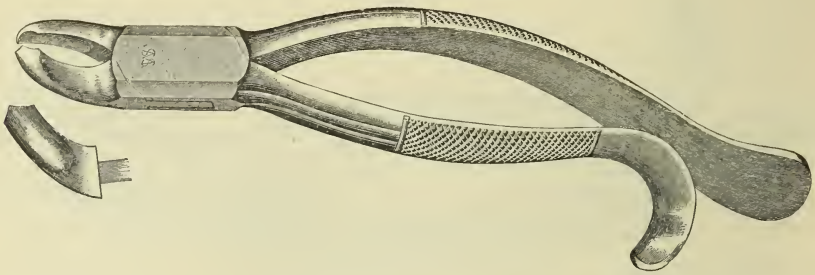


The curve of the beaks of these Forceps gives them a wide range of application. The short, thick-end handles afford facility for applying the power with the palm of the hand in direct line with the arm, the beaks being thus readily forced up along the root, which they grasp effectively. The instrument will be found especially valuable in extraction under nitrous oxide, as its use will obviate the necessity of frequent changes. The handles are so powerful as compared with the beaks that care must be exercised in their use. Devised by Dr. H. A. Hull.

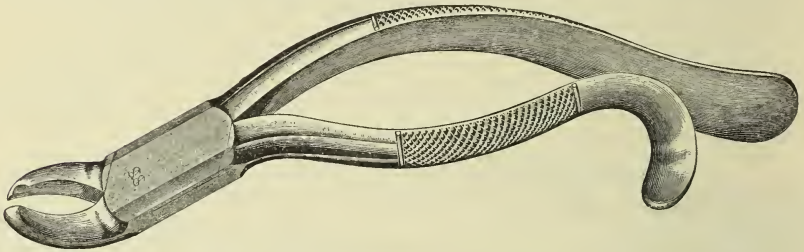


No. 102. Upper Bicuspid. Centrals, Laterals and Cuspids are frequently extracted with these Forceps. Devised by Dr. E. B. Goodall.

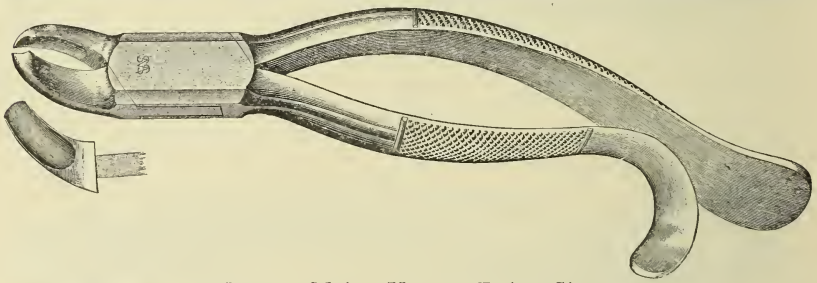
Upper Molar Forceps.



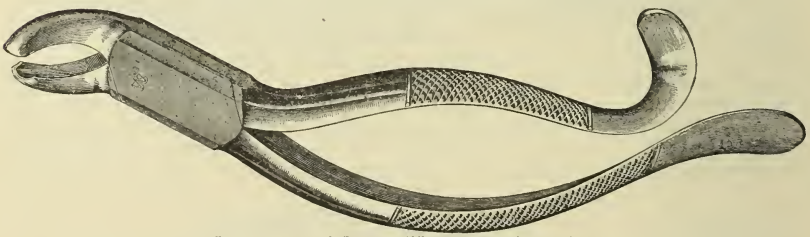
No. 18 R. Molar, Upper. Right Side. Designed by Dr. Chapin A. Harris.



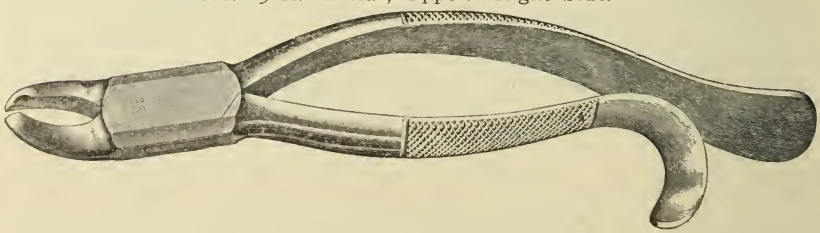
No. 18 L. Molar, Upper. Left Side. Designed by Dr. Chapin A. Harris.



No. 24. Molar, Upper. Either Side.

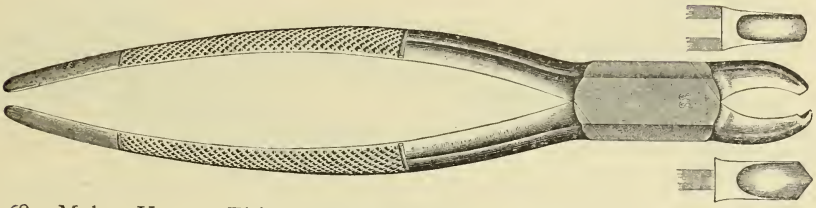


No. 19 R. Molar, Upper. Right Side.

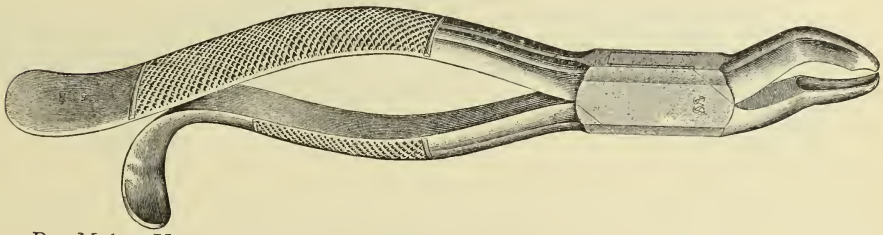


No. 19 L. Molar, Upper. Left Side.

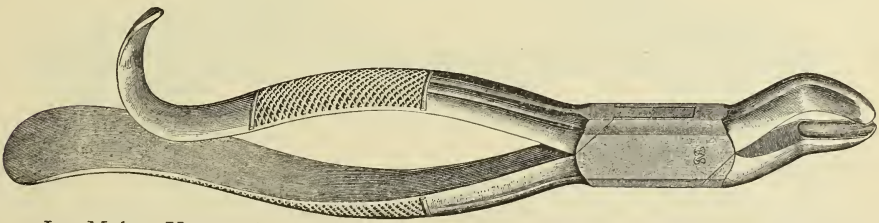
Upper Molar Forceps.—Continued.



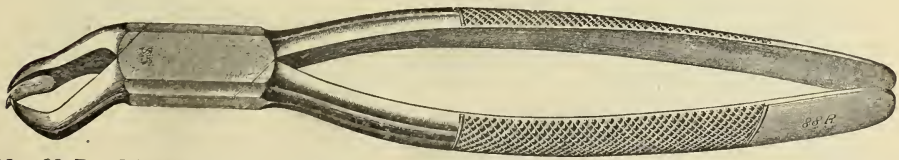
No. 68. Molar, Upper. Either Side. Straight. Designed by Dr. T. C. Stellwagen.



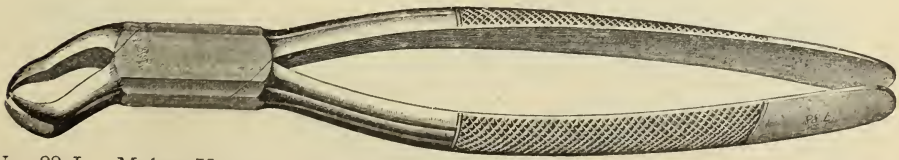
No. 53 R. Molar, Upper. Right Side. Bayonet Shape. Also made with Straight Handles.



No. 53 L. Molar, Upper. Left Side. Bayonet Shape. Also made with Straight Handles.

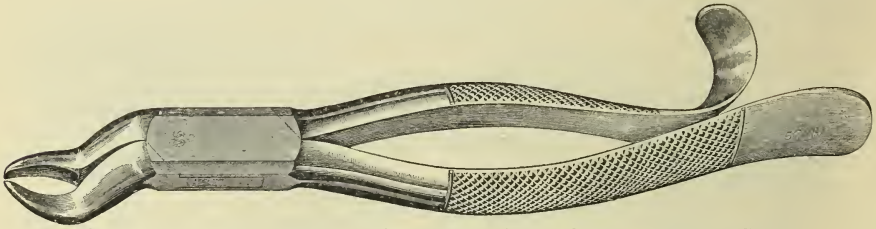


No. 88 R. Molar, Upper. Right Side. Three Beaks. Also made with Hook Handles.

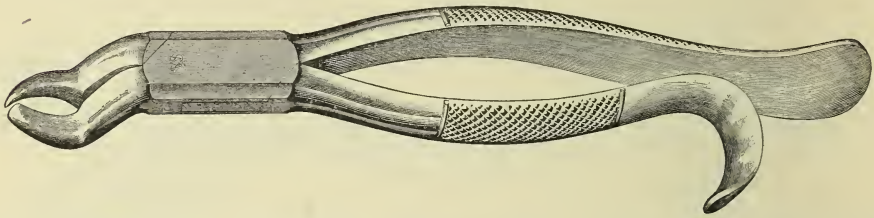


No. 88 L. Molar, Upper. Left Side. Three Beaks. Also made with Hook Handles.

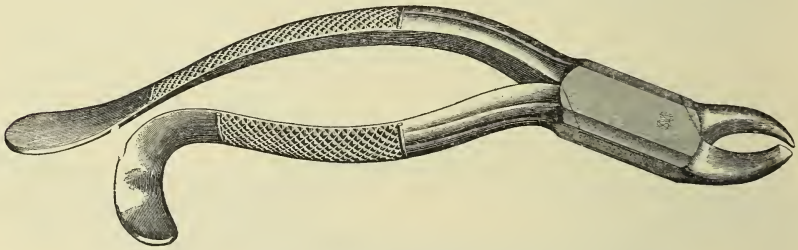
Upper Molar Forceps.—Continued.



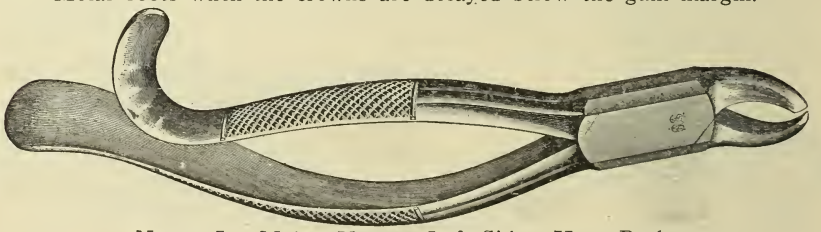
No. 57 R. Molar, Upper. Right Side. Horn Beak. Bayonet Shape.
Also made with Straight Handles.



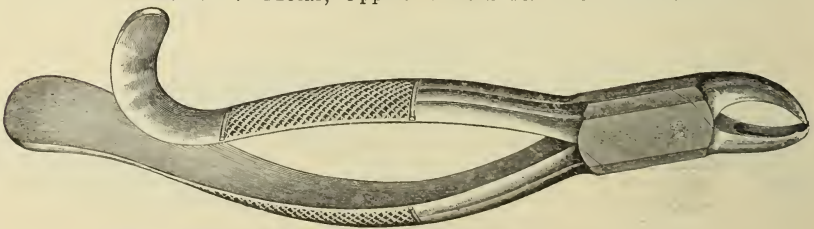
No. 57 L. Molar, Upper. Horn Beak. Bayonet Shape. Also made with Straight Handles.



No. 20 R. Molar, Upper. Right Side. Horn Beak.
These Forceps (No. 20 R. and L.), with No. 16, make an invaluable set for the extraction of Molar roots when the crowns are decayed below the gum margin.

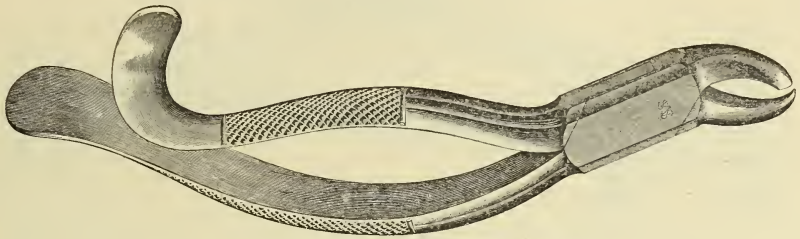


No. 20 L. Molar, Upper. Left Side. Horn Beak.

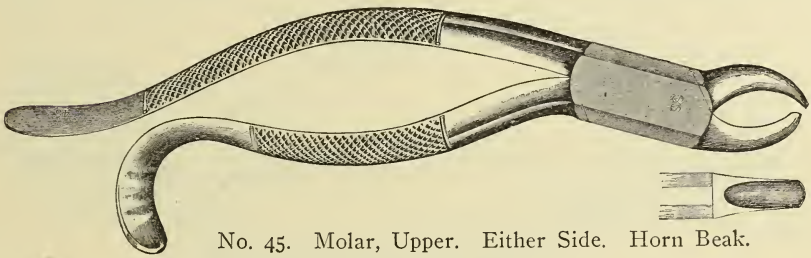


No. 59 R. Molar, Upper. Right Side. Horn Beak.

Upper Molar Forceps.—Continued.

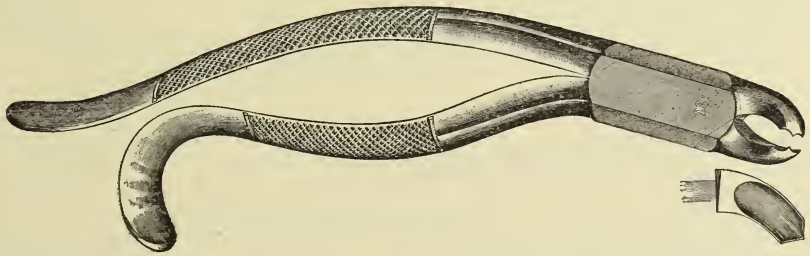


No. 59 L. Molar, Upper. Left Side. Horn Beak.

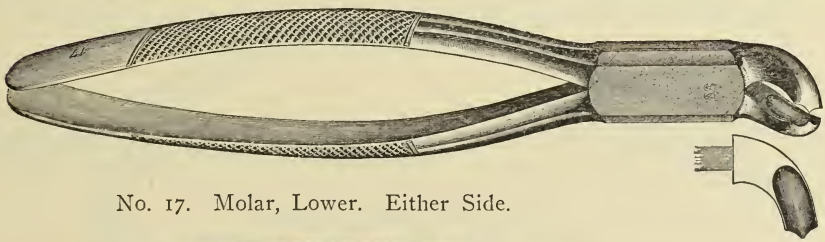


No. 45. Molar, Upper. Either Side. Horn Beak.

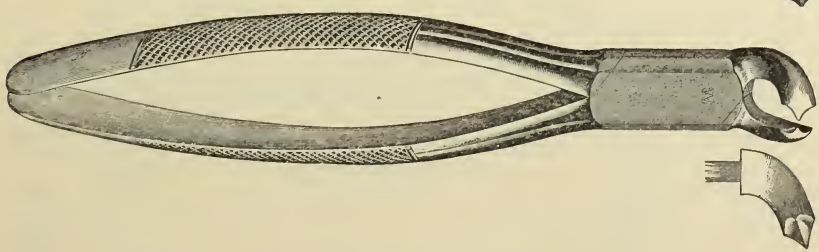
Lower Molar Forceps.



No. 15. Molar, Lower. Either Side. Designed by Dr. Chapin A. Harris.

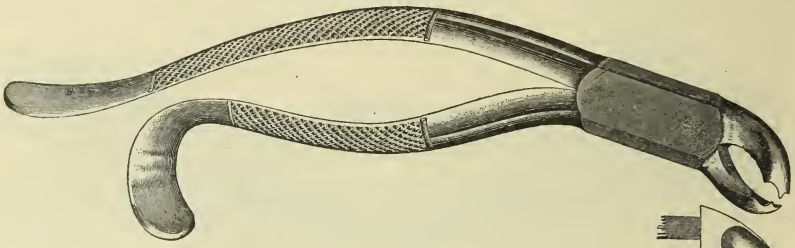


No. 17. Molar, Lower. Either Side.

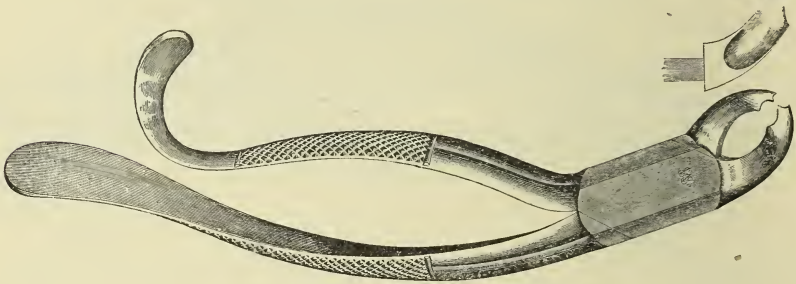


No. 47. Molar, Lower. Either Side. Designed by Dr. Hutchinson.

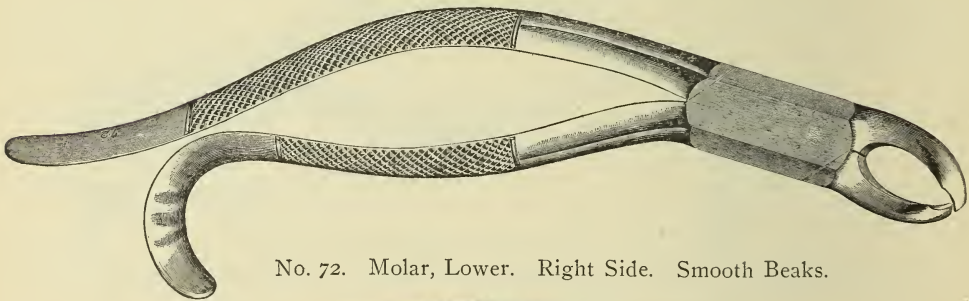
Lower Molar Forceps.—Continued.



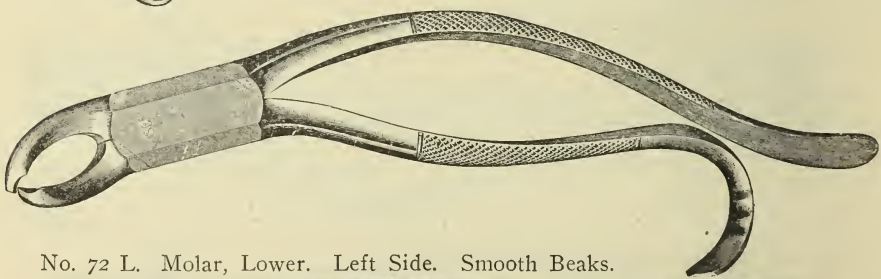
No. 28 R. Molar, Lower. Right Side.



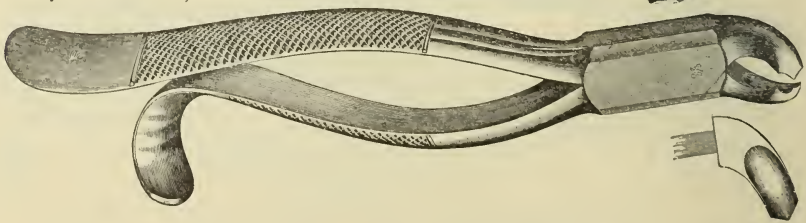
No. 28 L. Molar, Lower. Left Side.



No. 72. Molar, Lower. Right Side. Smooth Beaks.

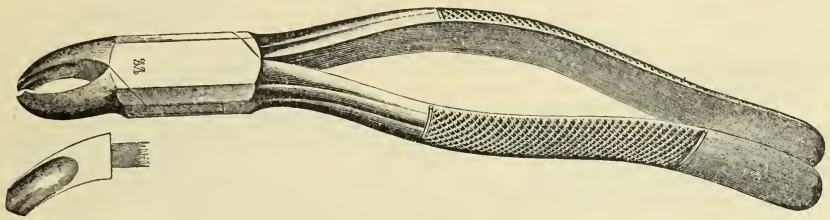


No. 72 L. Molar, Lower. Left Side. Smooth Beaks.

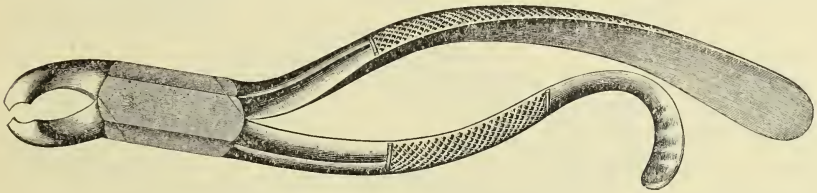


No. 70. Molar, Lower. For Either Side.

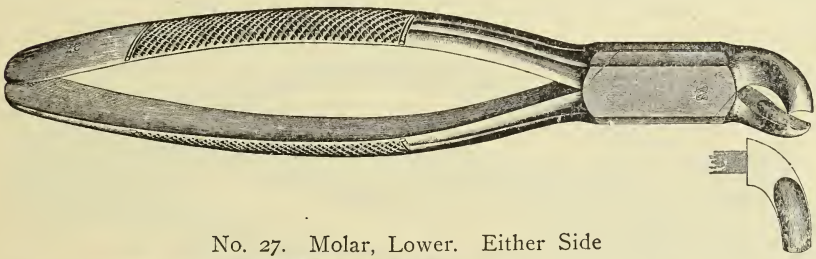
Lower Molar Forceps.—Continued.



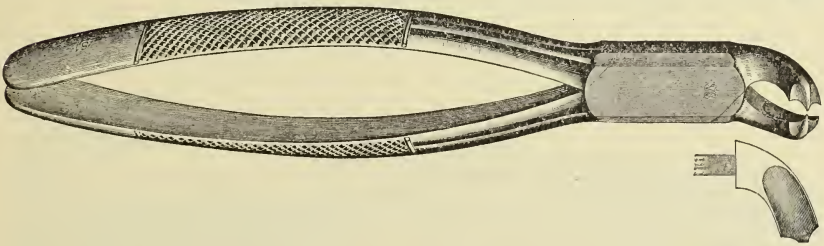
No. 71. Molar, Lower. For Either Side. The curves in the handles are the reverse of those of No. 70, so as to bow over the lower incisors. The advantage of this form is that all the force of the hand tends to draw the tooth out of its socket.



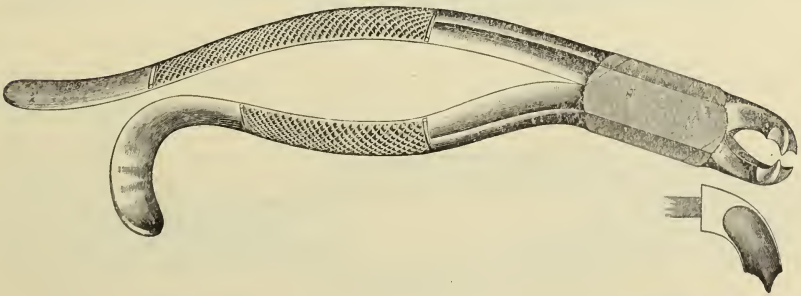
No. 54. Molar, Lower. Left Side. This pair of Forceps, with No. 28 for the right side, makes a very efficient set for Lower Molars.



No. 27. Molar, Lower. Either Side

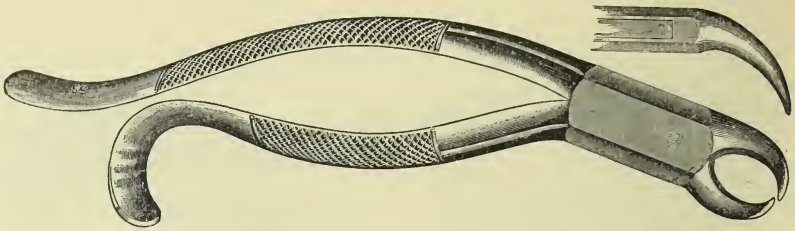


No. 51. Molar, Lower. Either Side. Designed by Dr. Wolverton.

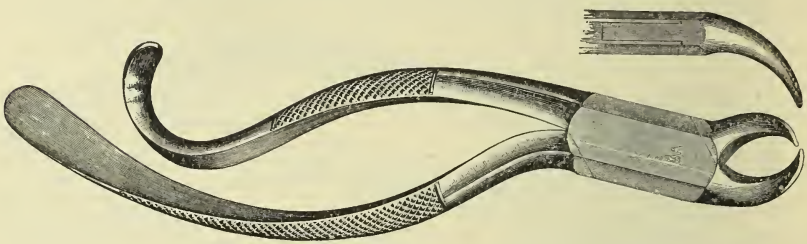


No. 60. Molar, Lower. Either Side. Designed by Dr. Wolverton.

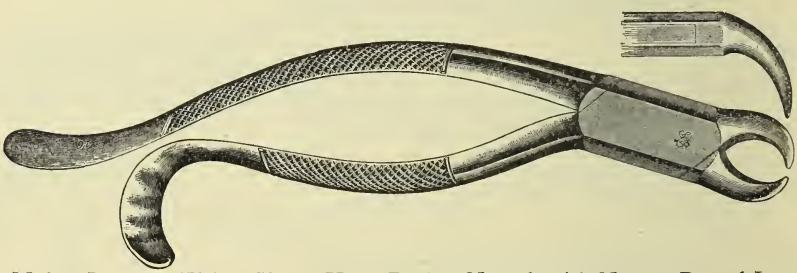
Lower Molar Forceps.—Continued.



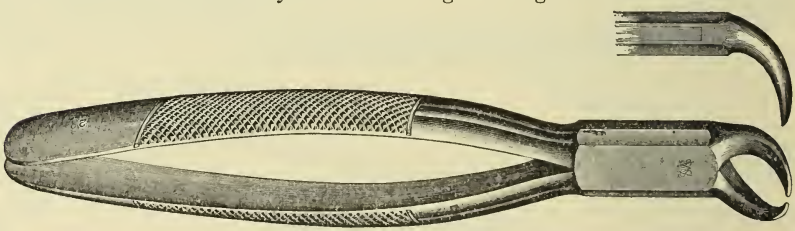
No. 55. Molar, Lower. Right Side. Horn Beak.



No. 56. Molar, Lower. Left Side. Horn Beak. No. 55 for the Right Side and No. 56 for the Left Side make a very efficient set for Lower Molars.

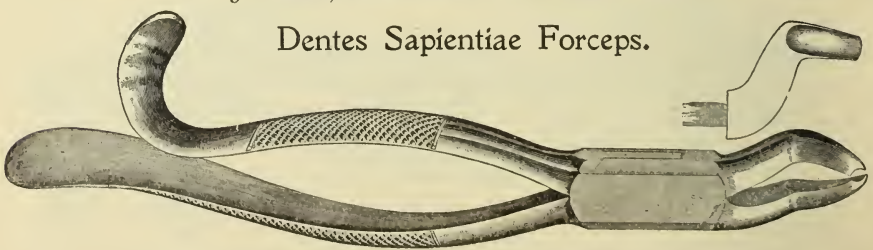


No. 16. Molar, Lower. Either Side. Horn Beak. No. 16, with No. 20, R. and L., makes an invaluable set for the extraction of molar roots when the crowns are decayed below the gum-margin.



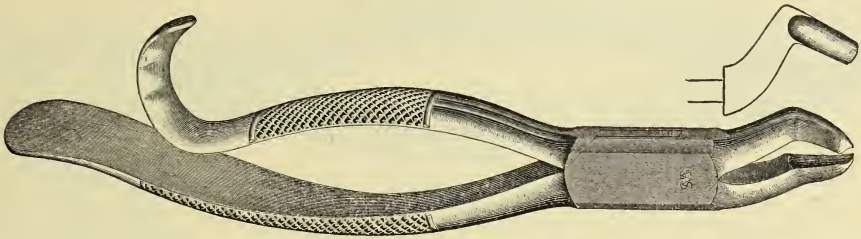
No. 23. Molar, Lower. Either Side. Horn Beak.

Dentes Sapientiae Forceps.

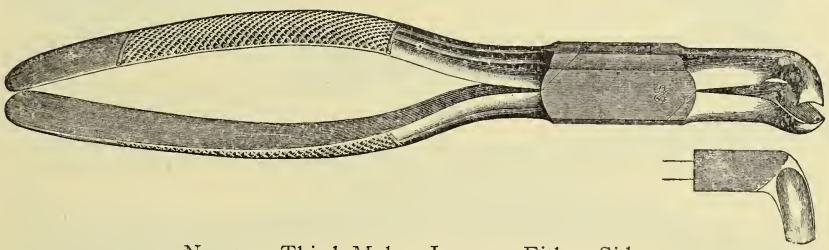


No. 10. Third Molar, Upper. Either Side. Also made with Straight Handles.

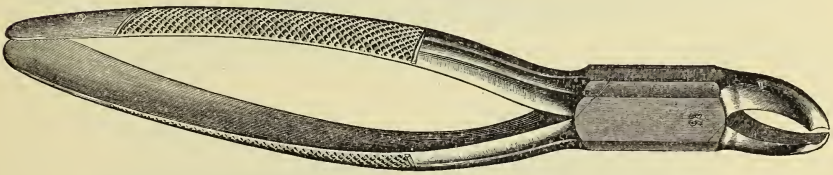
Dentes Sapientiae Forceps.—Continued.



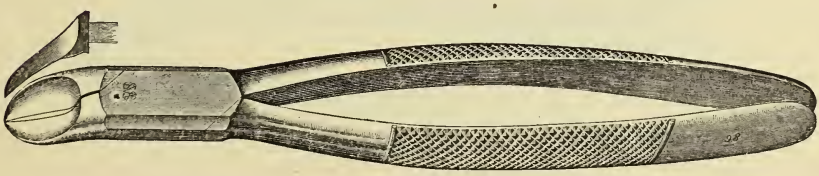
No. 104. Third Molar, Upper. Either Side. Like No. 10, but with beak at a different angle.



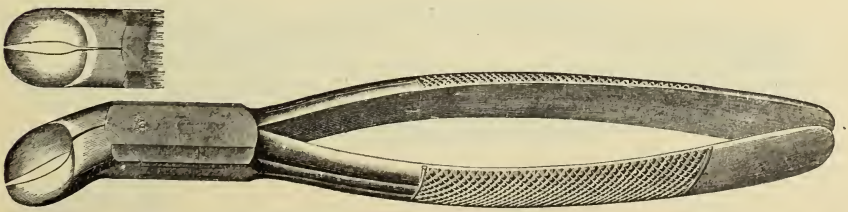
No. 22. Third Molar, Lower. Either Side.



No. 8. Third Molar, Lower. Either Side.

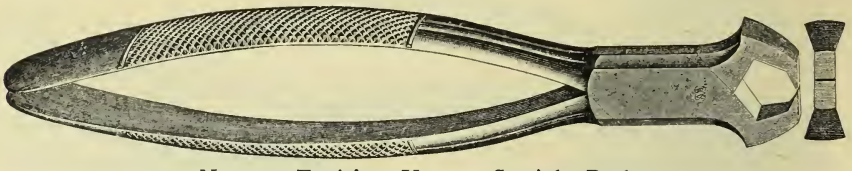


No. 98. Third Molar, Lower. Either Side.

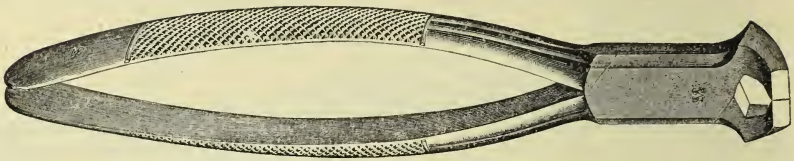


No. 5. Third Molar, Lower. Either Side (Physick's).

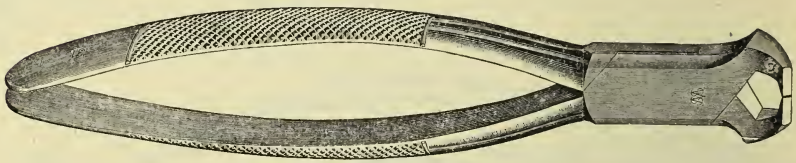
Excising Forceps.



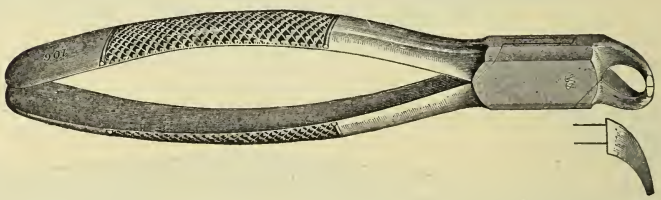
No. 12. Excising, Upper. Straight Beaks.



No. 31. Excising, Lower. Curved Beaks.

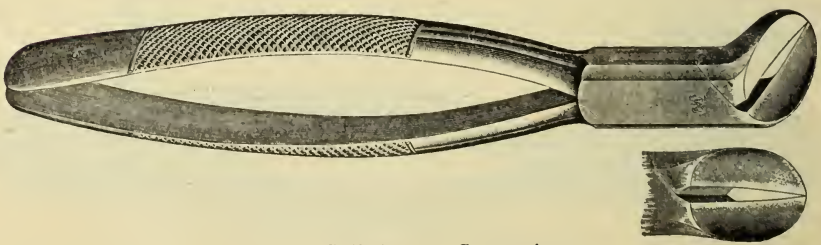


No. 31 A. Excising Lower. Curved Beaks. Like No. 31, but with narrow beaks for preparing the root and cutting off posts in mounting crowns.



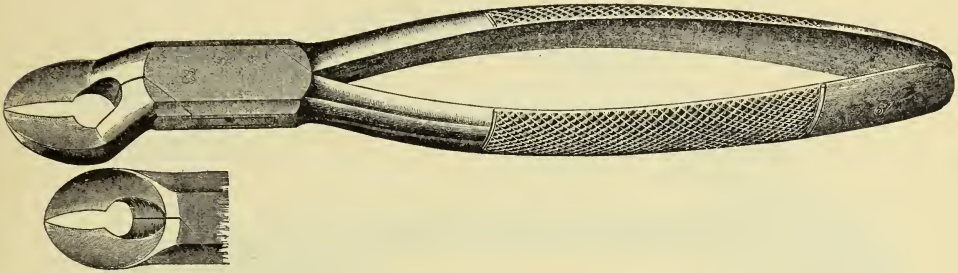
No. 106. For excising small portions of partially decayed crowns, but not heavy enough for excising entire crowns. Also useful for cutting off pins, etc.

Splitting Forceps.

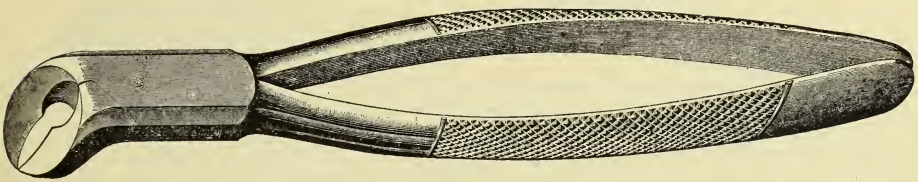


No. 6. Splitting or Separating.

Splitting Forceps.—Continued.

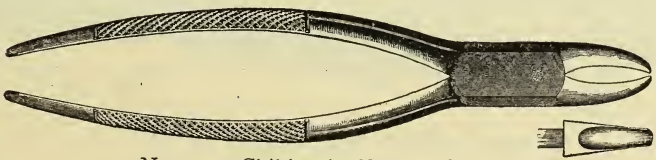


No. 67. Combined Root, Incising, Separating, Splitting and Elevating, Upper. Designed by Dr. T. C. Stellwagen.

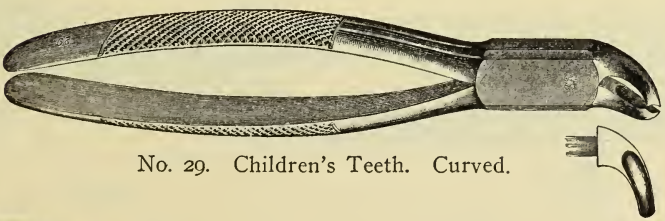


No. 66. Combined Root, Incising, Separating, Splitting and Elevating, Lower. Designed by Dr. T. C. Stellwagen.

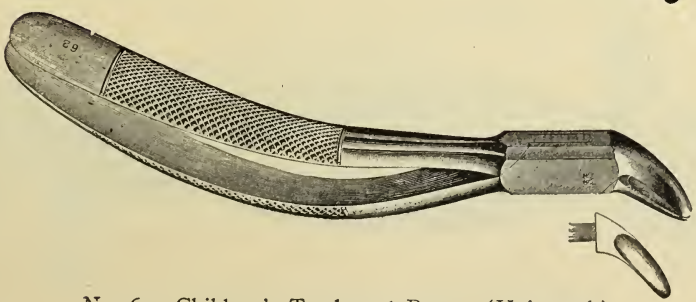
Children's Forceps.



No. 30. Children's Teeth. Straight.

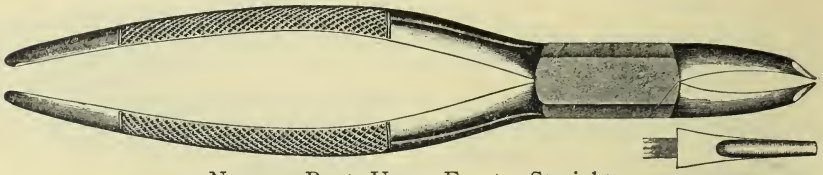


No. 29. Children's Teeth. Curved.

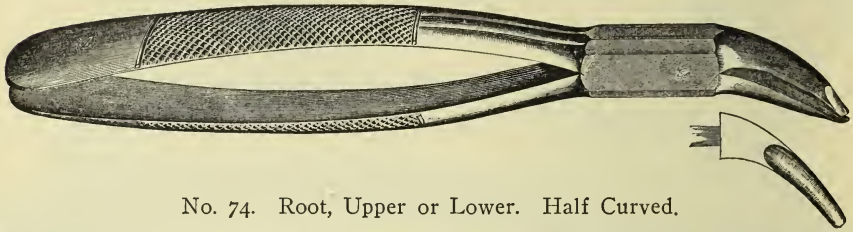


No. 62. Children's Teeth and Root. (Universal.)

Sub-Alveolar Thin Pointed Forceps.

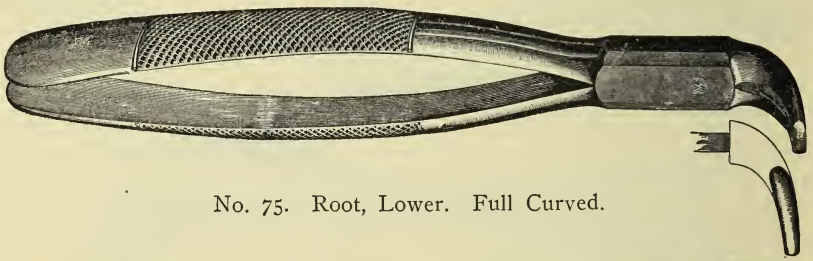


No. 73. Root, Upper Front. Straight.

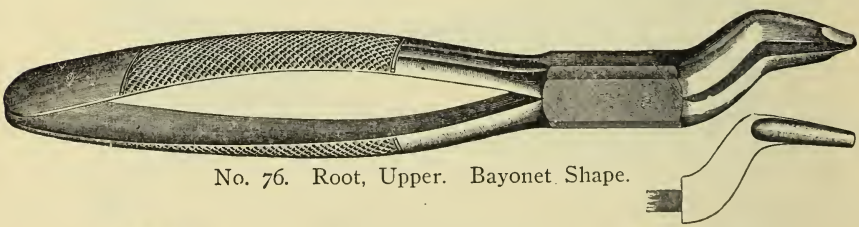


No. 74. Root, Upper or Lower. Half Curved.

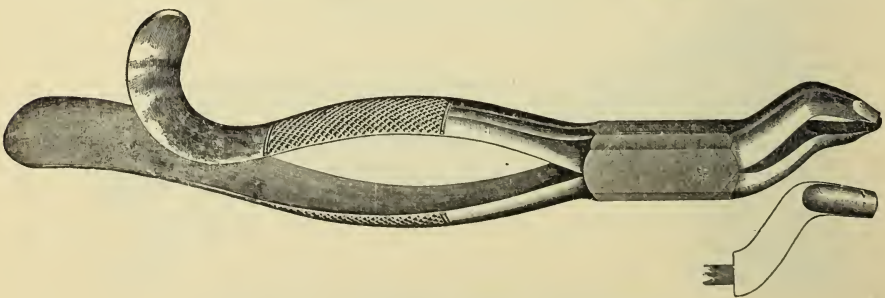
These Forceps (73 to 77) are designed to pass into the tooth socket, to bring away roots or teeth the crowns of which are entirely decayed and broken off. The beaks are perfectly smooth inside, and being also very thin, and the outside slope very gradual, they may, after insertion between the root and alveolus, be forced up so as to grasp and hold on to the sound portion of the root, thus securing its safe extraction The peculiar merit of this style of Forceps and method of extracting is that the natural edges of the walls of the alveolus are saved, and these on healing make the fullest and least irritable basis for artificial dentures. In using these Forceps care must be taken that the beaks grasp the root firmly before force is applied; otherwise the delicate points may chip. The points are not intended to bear the strain of extraction. Their office is simply to prepare the way for securing a firm grasp with the beaks proper. Every pair is thoroughly tested and it will do all that we claim for it, but we cannot hold ourselves responsible for breakages caused in disregard of instructions.



No. 75. Root, Lower. Full Curved.

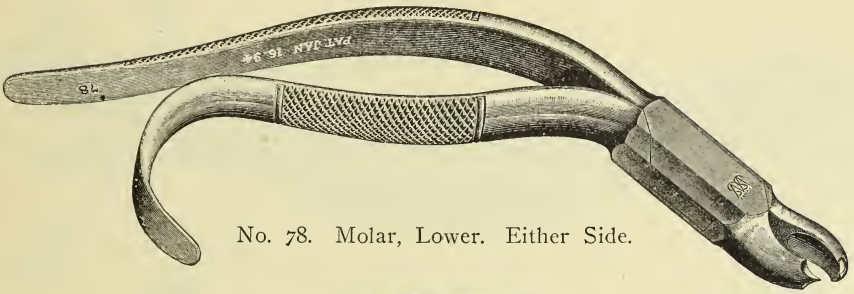


No. 76. Root, Upper. Bayonet Shape.

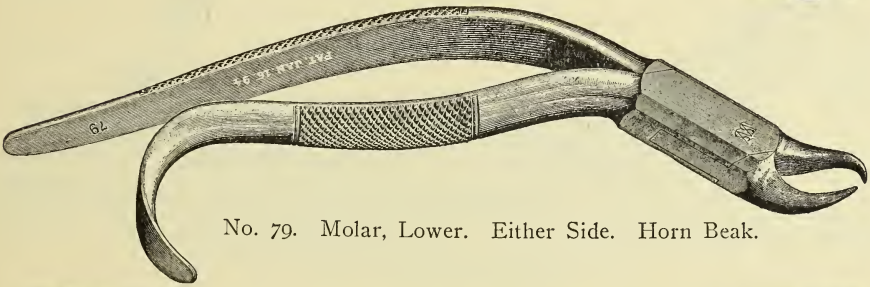


No. 77. Third Molar, Upper. Either Side.

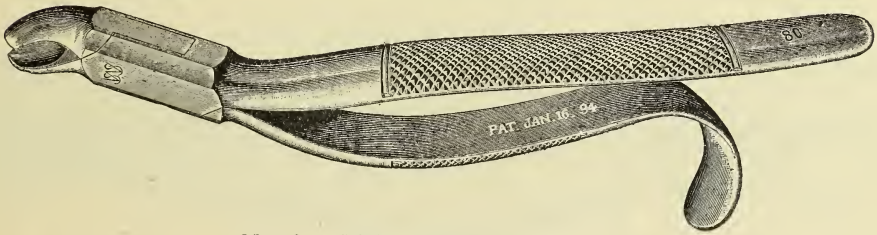
Prof. J. A. Watling's Forceps.



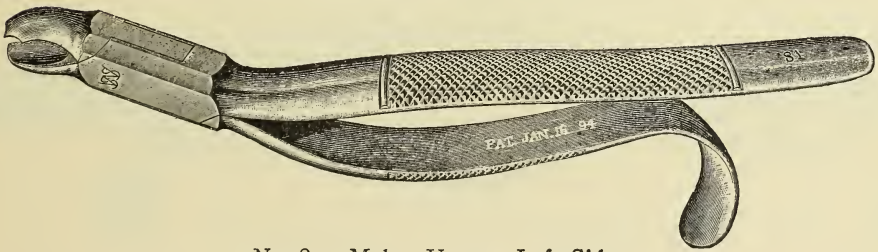
No. 78. Molar, Lower. Either Side.



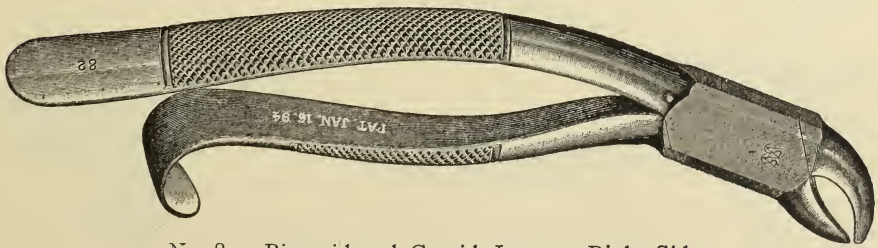
No. 79. Molar, Lower. Either Side. Horn Beak.



No. 80. Molar, Upper. Right Side.

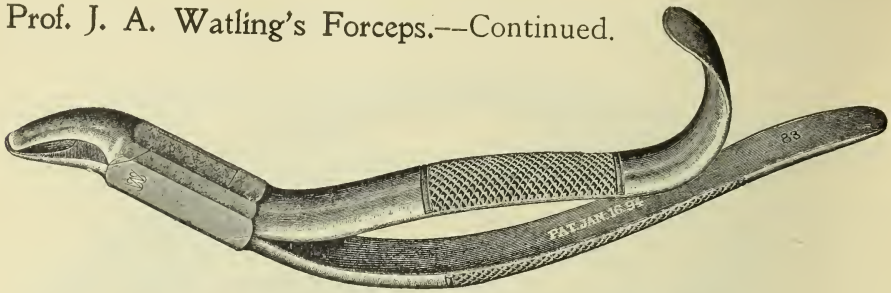


No. 81. Molar, Upper. **Left Side.**

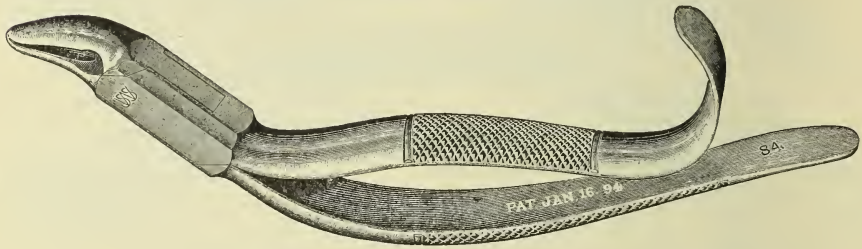


No. 82. Bicuspid and Cuspid, Lower. **Right Side.**

Prof. J. A. Watling's Forceps.—Continued.



No. 83. Bicuspid, Lower. Left Side.

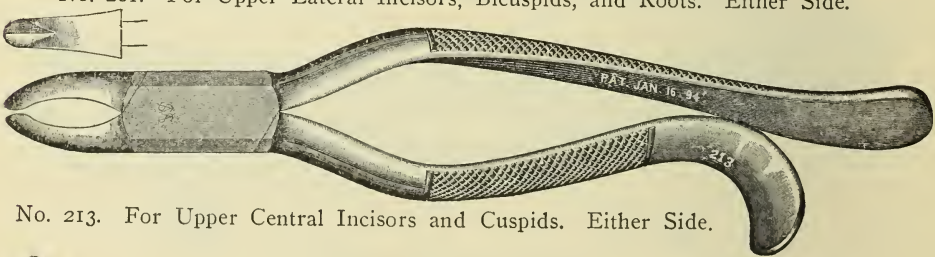


No. 84. Alveolar, Lower. Either Side.

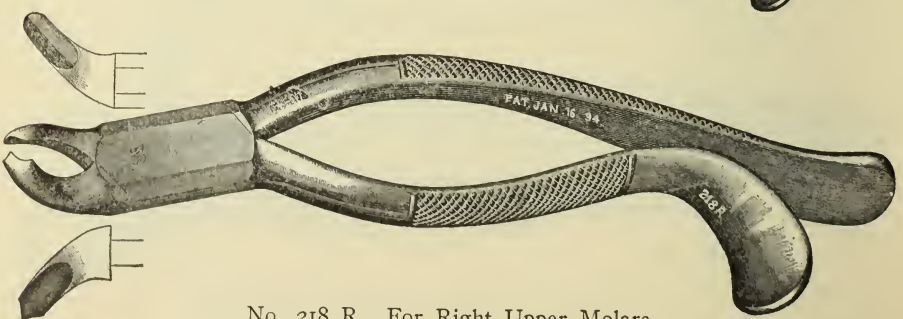
The Common-Sense Forceps.

Price. per pair, $3.00.

No. 201. For Upper Lateral Incisors, Bicuspids, and Roots. Either Side.

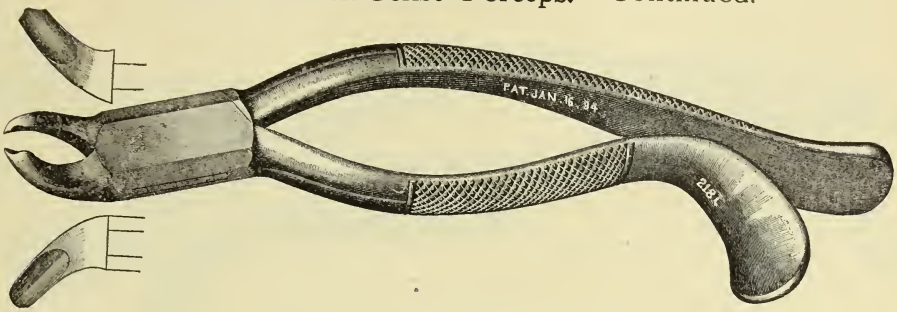


No. 213. For Upper Central Incisors and Cuspids. Either Side.

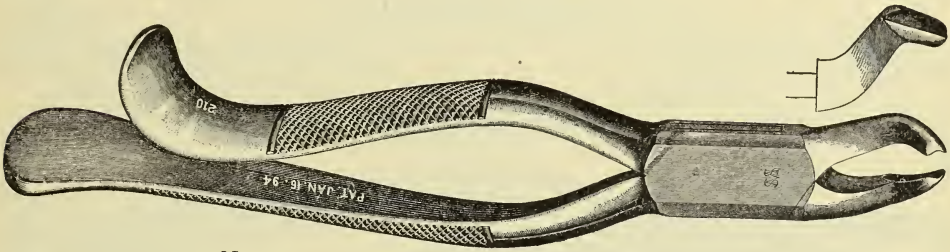


No. 218 R. For Right Upper Molars.

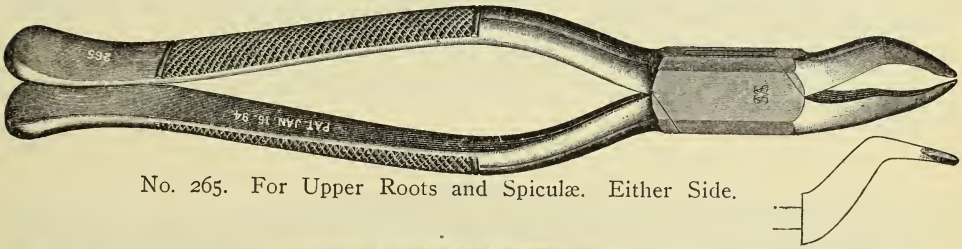
The Common-Sense Forceps.—Continued.



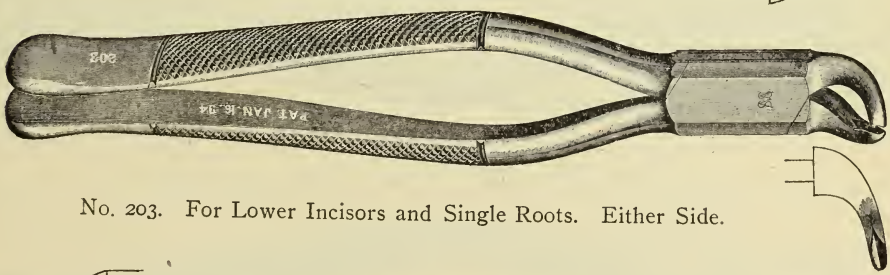
No. 218 L. For Left Upper Molars.



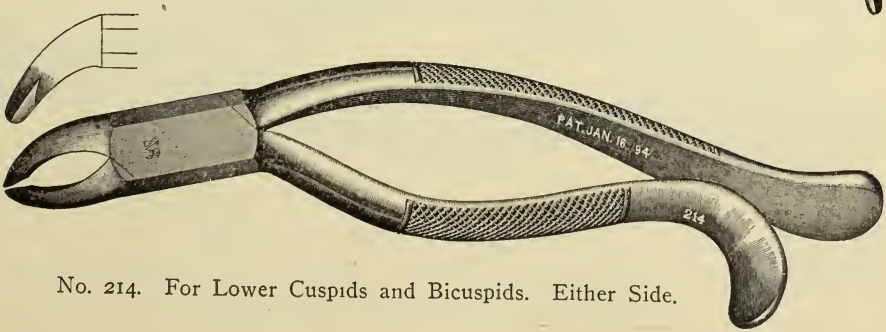
No. 210. For Upper Third Molars. Either Side.



No. 265. For Upper Roots and Spiculæ. Either Side.

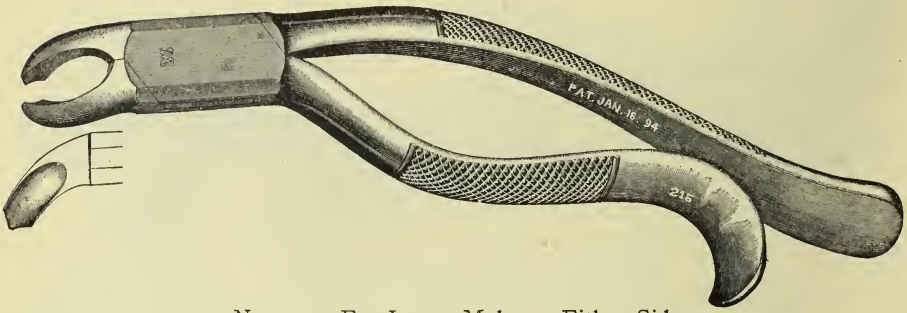


No. 203. For Lower Incisors and Single Roots. Either Side.

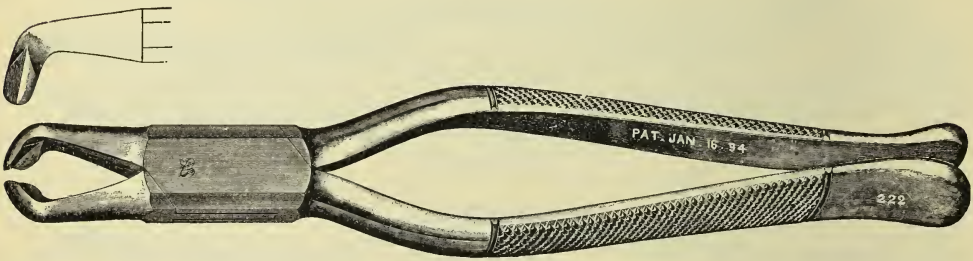


No. 214. For Lower Cuspids and Bicuspids. Either Side.

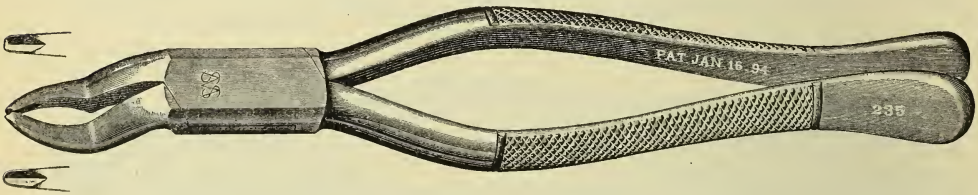
The Common-Sense Forceps.—Continued.



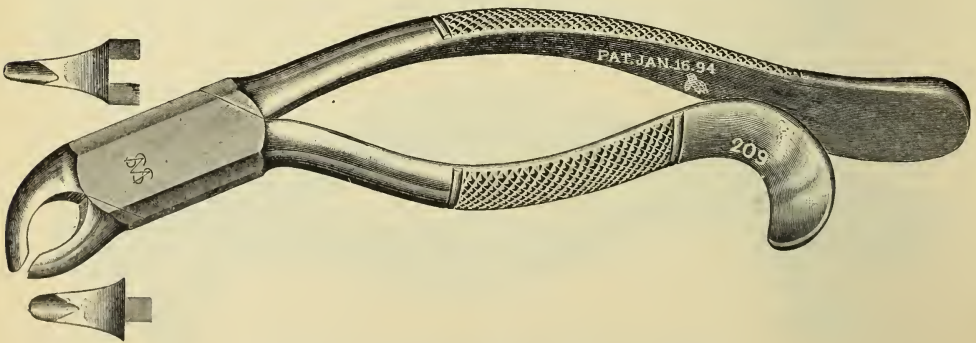
No. 215. For Lower Molars. Either Side.



No. 222. For Lower Third Molars. Either Side.

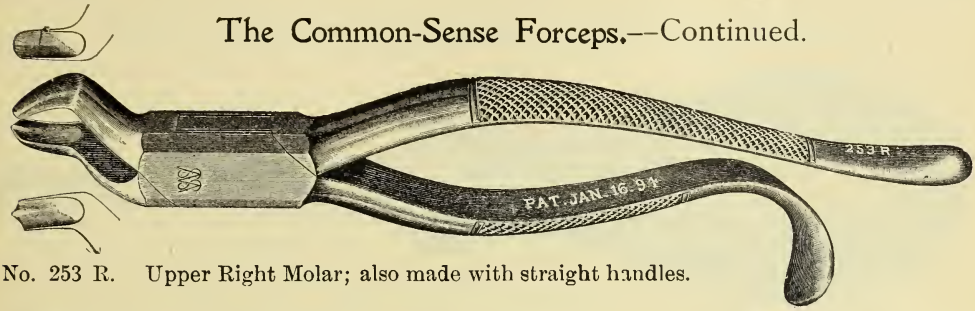


No. 235. For Upper Bicuspids and Single Roots.

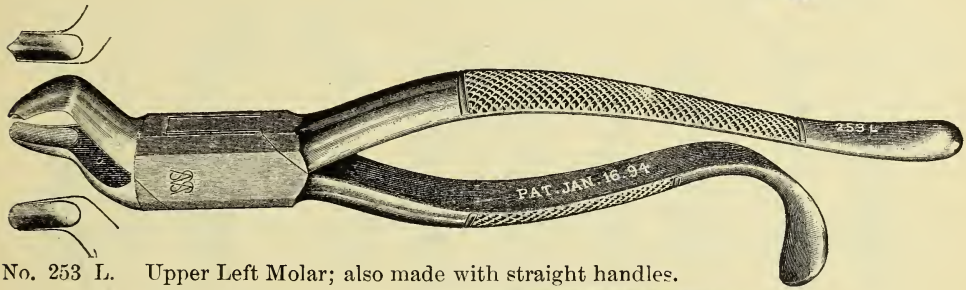


No. 209. For lower Incisors and Bicuspids.

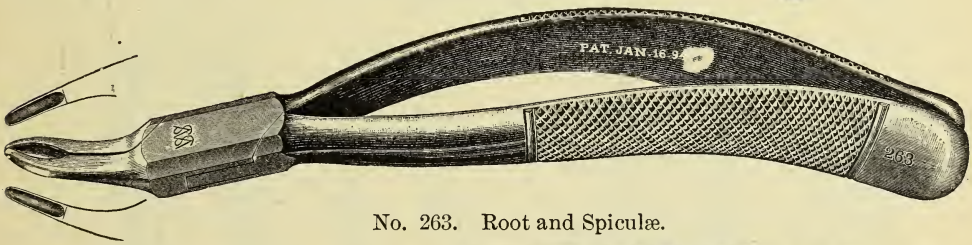
The Common-Sense Forceps.—Continued.



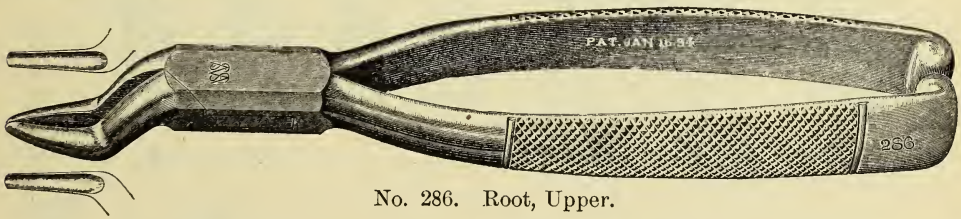
No. 253 R. Upper Right Molar; also made with straight handles.



No. 253 L. Upper Left Molar; also made with straight handles.

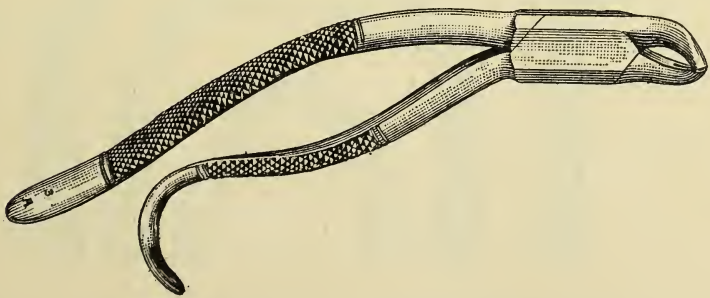


No. 263. Root and Spiculæ.



No. 286. Root, Upper.

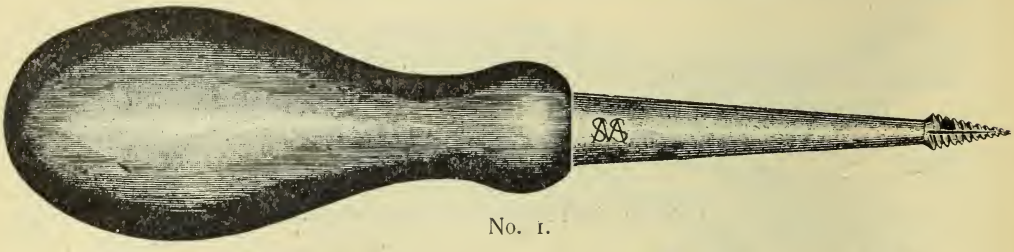
The Patterson Special Extracting Forcep.



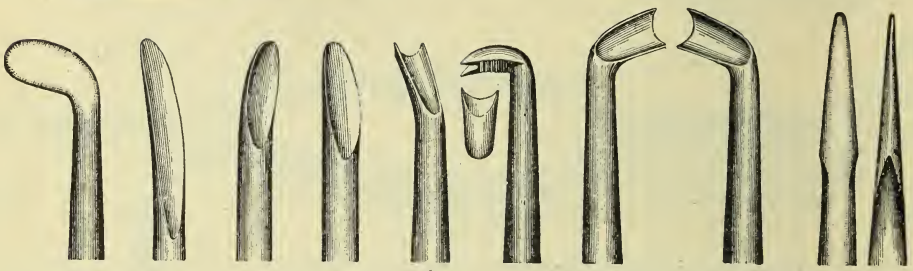
For extracting Lower Incisors and Roots. Beaks are smooth and have a full curve down. Handles curved same as Universal Lower No. 15.

Price $2.00

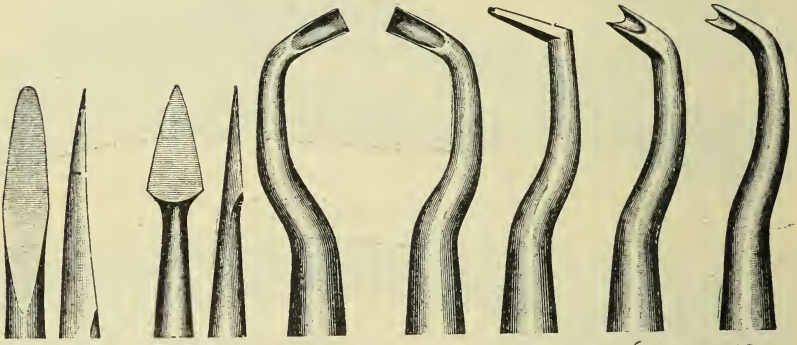
Root Extractors, Screws, Punches, Hooks and Elevators.



No. 1.

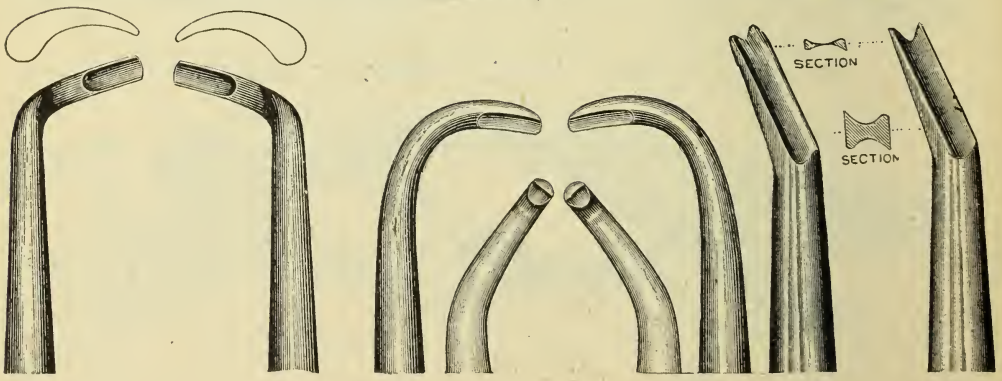


2 3 4 5 6 7 8 9 10



11 12 13 14 15 16 17

New Pattern Extractors. Third Molar Elevators.



20 21 22 23 24 25

Prices, Nos. 1 to 17, in round ebony handles.....each, $0.75
Prices, Nos. 20 to 23, in round ebony handles.....each, 1.00
Prices, Nos. 24 to 25, in round ebony handles.....each, 1.75

Mechanical.

THE development of this department is in keeping with the development of our other departments. It is right up-to-date. No person ever makes new things for the Laboratory that can't be found in our stock as soon as they are advertised, sometimes before.

Work Bench No. 4.

(Patent Pending.)

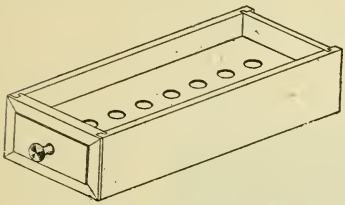
Manufactured by The Ransom & Randolph Co., Toledo, Ohio.

This bench is as well made and as well finished as a fine Dental Cabinet, and is intended for use in the operating room. It is closed by a roll top which follows the grooves in the upright sides above the bench top at a height to clear any lathe heads or electric lathes on the market and when closed every drawer except two unimportant ones, is automatically locked. When open, the roll is entirely concealed, and the ends fold back so as to leave no obstruction to the light.

The top is a combination of finished wood and smooth but unpolished marble, as shown in the illustration. The wood top is to receive the lathe head. Between the two left-hand drawers is a chamber for the lathe belt, and a slot for the belt may be cut into the wood top, should one be necessary. If a direct connected electric lathe is used, the belt slot is not needed, and a small hole for an electric cord may be bored in line with the belt chamber, and wires can be concealed between the panel in the recess and the finished back of the bench.

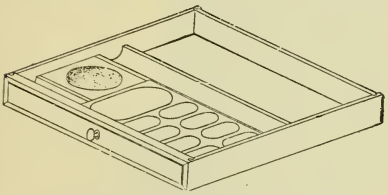
The filing block is of hard maple and is made removable.

The upper left hand drawer has two transverse partitions dividing it into three compartments, and is for brush wheels and felt wheels and cones. At the right of this drawer is a drawer containing a rack for mounted grinding wheels.



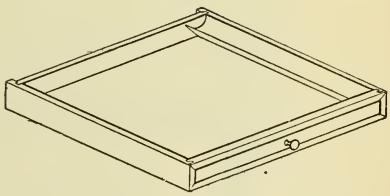
Rack for Mounted Grinding Wheels.

Beneath the two drawers mentioned is a panel which conceals a double gas cock. A lead supply pipe leads to a point near the floor, where the gas service is to be attached; one pipe leads from one of the cocks to the double nozzle, and another pipe leads from the other cock to the single nozzle. The double nozzle in the rear right hand corner is also connected with the bellows in the bellows compartment.

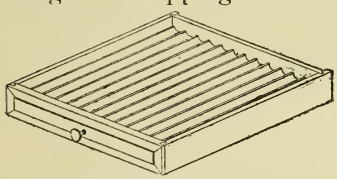


Drawer for Gold, Solder, Plate, etc.

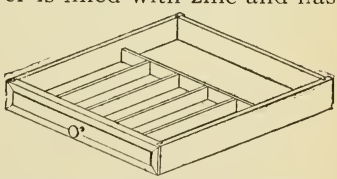
If compressed air is to be used we will pipe the bench for it and place the air cock under the drawer for polishing wheels. This arrangement enables the operator to control the flow of gas or air with the left hand, without reaching over the bench top. The upper drawer of the center tier is for gold, solder, plate, wire, etc., and contains a borax block and a grooved block for borax brushes, spatula, etc. Underneath this is a drawer for rubber filings, plaster and wax cuttings, and other waste. It is lined with zinc, and contains a suitable receptacle for spatulas, plaster knife, etc., and special provision for scraping off wax and plaster from the tools used. Beneath the two drawers of the center tier is a tray of zinc for gold filings and clippings. It has a novel arrangement for preserving and removing fine filings. The right hand tier of drawers is surmounted by a wooden slide intended for an arm rest. The first drawer below the slide is for files, scrapers, etc., and the bottom is a grooved block for keeping the instruments separated. The second and third drawers are suitably divided for pliers, punches, plate cutters, etc. The fourth drawer is for miscellaneous supplies and stock. The fifth drawer is lined with zinc and has a longitudinal division. It is intended for a small quantity of plaster and marble dust. If the compartment behind the door is not wanted for a bellows, the opening through which the treadle protrudes may be closed with a finished, raised panel (which is furnished with the bench), and may be used for storage purposes.



Drawer for Filings, Plaster Scrapings, etc.



Drawer for Files, Scrapers, etc.



Drawer for Pliers, Punches, Plate Cutters, etc.

Dimensions.—Height, over all, 3 feet, 9½ inches; height of bench top, 3 feet; length, over all, 3 feet, 8 inches; depth, over all, 1 foot, 5¼ inches.

PRICE.

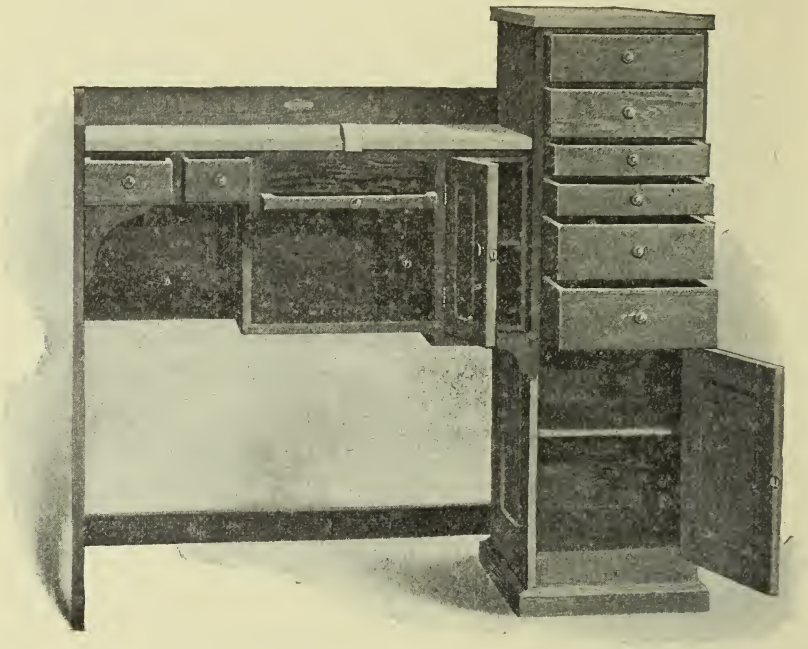
In solid mahogany	$60.00	Bellows extra	$ 5.00
In walnut	55.00	Cock and piping for compressed air, extra	3.00
In quarter sawed oak	50.00		

N. B.—The treadle used on the bellows in this bench is a special pattern and will be furnished to those who wish to use bellows already on hand, at 50 cents.

Work Bench No. 1, for Rubber Work.

(Patent Pending.)

Manufactured by The Ransom & Randolph Co., Toledo, Ohio.



This bench is for rubber work and is one of a set of three, the other two being respectively for gold work and plaster and sand work. The higher part is surmounted by a marble slab 16½ inches x 14½ x ⅞ inches thick, and is the place where the vulcanizing should be done and where the vulcanizer should remain permanently.

Beneath the slab are two drawers 3 inches deep, for flasks, wrenches and tools that are used about the vulcanizer.

The third drawer contains a series of shallow compartments, concave in shape, for scrapers.

The fourth drawer is partially divided by grooved compartments similar to Drawer No. 3, and is intended for files, etc.

Drawers five and six are for hammers, horn mallets and other large tools, and for rubber, wax and other supplies.

The cupboard contains a shelf and will be found convenient.

Adjacent to the series of drawers described above, and under the right hand end of the lower top, is a cupboard designed for the tooth stock.

At the left hand end of the bench is a drawer containing a rack for holding mounted grinding wheels.

To the right of this drawer is another for brush wheels, felt wheels and cones.

Between these last two drawers runs the belt of the lathe.

Under the filing block is a tray for catching rubber filings, plaster cuttings, etc.

The lower top of the bench is of hard maple, and a 4 inch rail extends along the back and end.

The filing block is placed in such a location that the workman, when using it, is within easy reach of his tool drawers.

Dimensions.—Height of vulcanizer stand, 45½ inches; height of bench, 36 inches; size of bench top, 15½x34 inches; length, over all, 49 inches.

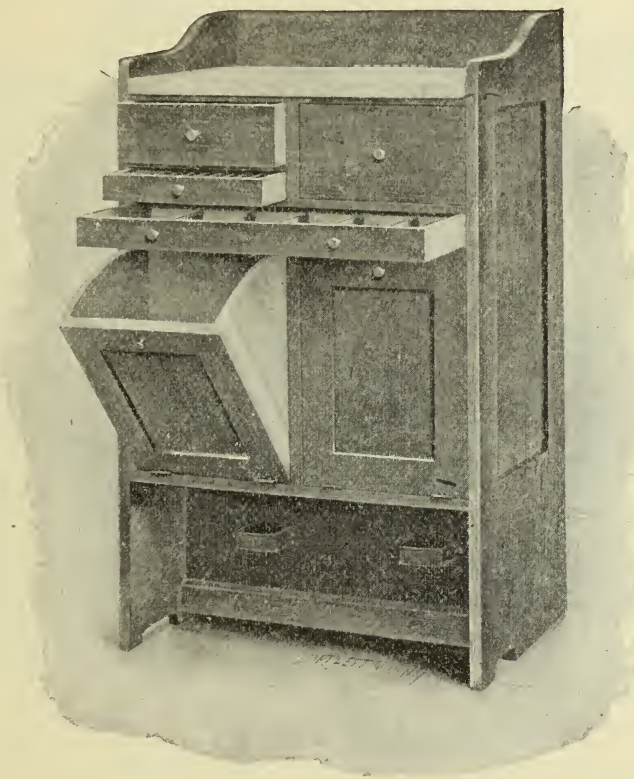
PRICES.

Price in finished oak	$20.00
Cock and piping for compressed air, extra	3.00

Work Bench No. 2 for Plaster and Sand Work.

(Patent Pending.)

Manufactured by The Ransom & Randolph Co., Toledo, Ohio.



This bench is one of a set of three, the other two being respectively for rubber and gold work.

The top of the bench is of marble, 19½x24, ⅞ inches thick.

At the back of the marble slab is an opening 2¾ inches by 6 inches which enters a metal chute for carrying waste plaster, etc., through the bench, back of the drawers to a galvanized iron receptacle beneath. This receptacle rests upon a shelf and can be withdrawn by its two handles.

The left upper drawer is for rubber bowls and articulators.

Beneath the upper drawer is a shallow drawer arranged with shallow compartments, concave in shape, for spatulas, plaster knives, etc., the arrangement of the compartments being such that the various tools remain where placed.

At the right of the two drawers already mentioned is a drawer lined with zinc for sand, moulding rings, ladles and all appliances used in casting.

The drawer beneath the three upper drawers contains divisions for 18 impression trays.

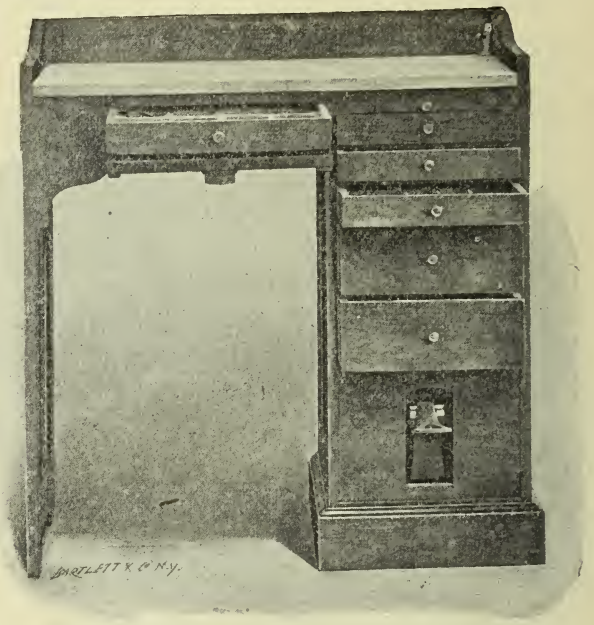
The two lower compartments are V shaped and hinged at the lower point. One is for impression plaster and the other for cast plaster. The center of gravity of these drawers is such that they remain either in an open or closed position, as placed.

DIMENSIONS.—Height of slab, 39 inches; height over all, 43 inches; width, 25½ inches; depth, 20 inches.

Price, complete, in finished oak **$18.00**

Work Bench No 3 for Gold Work.

(Patent P nding.)
Manufactured by The Ransom & Randolph Co., Toledo, Ohio.



This bench is one of a set of three, the other two being respectively for rubber work and for plaster and sand work.

The conveniences which are contained in it are such that it can be used either in the Laboratory or Operating Room.

The top is marble, 16x34x⅞ inches thick. Under the right hand end is a slide, and beneath this slide is a drawer arranged with shallow compartments, concaved in shape, for files, etc., each compartment being intended for a single instrument.

Beneath this drawer are two drawers containing divisions of suitable size to hold the various plate cutters, benders, punches, shears, pliers, etc.

Drawers four and five are for bulky tools and supplies.

The lower compartment contains the foot bellows, fixed permanently in place, the treadle only of which projects in front of the bench. The bellows is connected with a metal pipe in the rear right hand corner of the bench, and this pipe extends upward behind the drawers and through the marble slab, and is surmounted by a neat polished brass casting with a horizontal nozzle, to which the blow-pipe tubing may be attached.

If the purchaser of this bench uses the compressed air tank instead of the bellows, he may utilize the lower compartment as a drawer by withdrawing and reversing it, the other end of the drawer being finished and furnished with a drawer pull. The front end then becomes the rear end, and the opening is closed by a slide, furnished with all benches.

Under a filing block, which is furnished with the bench, near the left hand end of the bench, is a drawer arranged with concave blocks cut out of the solid wood. One of these concavities is elliptical in shape, for gold plate, wire, etc., and five are circular in shape, for different grades of gold solder or for other purposes. The drawer also contains a slightly concaved borax block of marble, ⅞ inch thick, and a grooved block from which brushes and small instruments may be readily taken. This drawer can only be opened by one who knows the location of a secret lock. Below the gold drawer is a slide of zinc in a wooden frame for catching gold filings. This slide gradually slopes downward to the center, which has a screw cap removable from below.

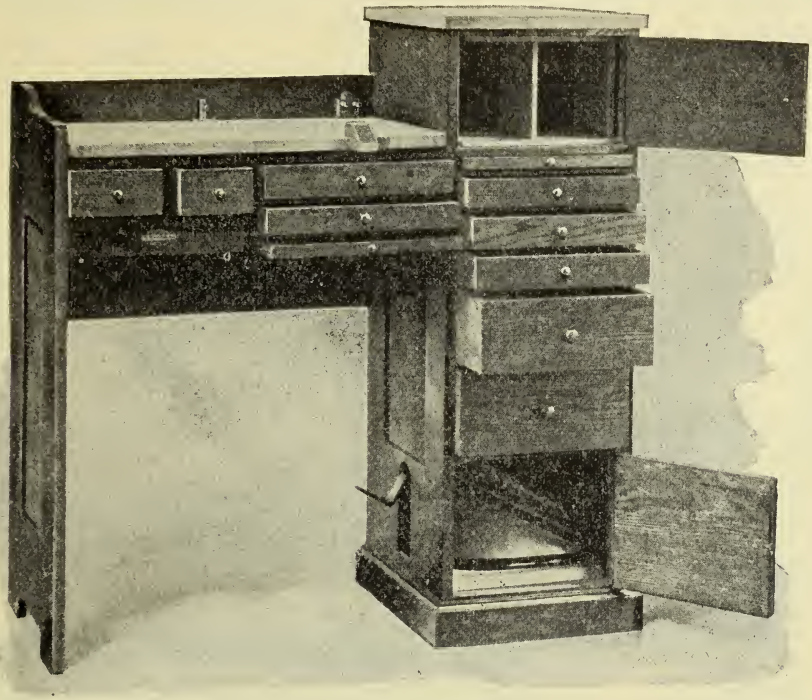
DIMENSIONS.—Height to top of marble, 36 inches; width (on floor), 36¼ inches; depth (on floor), 16½ inches.

Price, in finished oak.....$21.00
Price, in finished oak, with 9 in. bellows, as illustrated..... 26.00

Work Bench No. 5.

(Patent Pending.)

Manufactured by The Ransom & Randolph Co., Toledo, Ohio.



Without doubt the Laboratory Bench should possess plenty of top surface; and the tools and supplies used for gold work, and those used for vulcanite work should be kept entirely separated, as one can who has our Nos. 1 and 3 Benches.

Nevertheless, there are dentists who have limited space for a bench, and for those our Bench No. 5 will be found a satisfactory substitute for one with greater top surface and more drawer room.

The higher top is of smooth but unpolished marble and is intended as a permanent place for the vulcanizer. Beneath is a space for the tooth stock, and below this space are three drawers conveniently divided into suitable spaces for the various tools used.

Below the three shallow drawers are two deeper ones for bulky tools and supplies, and in the lower space the bellows may be placed with the treadle projecting through the side. The bellows is connected with one of the pair of nozzles on the bench top by a flexible tube and iron piping. Beside the air nozzle is one for gas, the pair supplying gas and air for the blow-pipe. Between the pair of nozzles and left end of the bench is a single nozzle which is for supplying gas for the Bunsen Burner. The flow of gas is controlled by a double cock concealed behind the panel beneath the two drawers at the left end of the bench.

The lower top is made of hard maple, and removably fastened to its front edge is a maple filing-block.

Immediately below the filing-block is a drawer containing depressions for different karats of gold, solder, gold plate, etc., a marble borax slab and a place for tools. The second drawer is for rubber filings, plaster and wax cuttings and other waste, and is lined with zinc and contains a suitable receptacle for spatulas, plaster knife, etc., and special provision for removing the wax and plaster from the tools used. Beneath the two drawers mentioned is a tray of zinc for gold filings and clippings. It has a novel arrangement for separating the filings from the plate clippings.

At the left end of the bench are two drawers for the lathe appurtenances, the right one containing a rack for mounted grinding wheels, cones, etc. Between these two latter drawers is an opening through which the lathe belt may run if foot power is used.

PRICES.

Bench No. 5, finished oak, less bellows.....$35.00
Bench No. 5, finished oak, with bellows 40.00

N. B.—The treadle used on the bellows in this bench is a special pattern and will be furnished to those who wish to use bellows on hand, at 50 cents.

Miscellaneous Precious Metals.

In this list we include all precious metals carried in stock that are not mentioned in list of the product of J. M. Ney & Co., whose goods are a specialty with us.

16K Gold Plate	per dwt.,	$0.87
Coin Gold	"	1.02
Coin Gold Solder	"	.96
Gold Solder, 18K, in prepared filings, in 1 dwt. bottles	"	.90
Gold Solder, 20K, in prepared filings, in 1 dwt. bottles	"	1.00
Platinum Solder, Gold 75%; Platinum, 25%	"	1.20
Gold Wire, Round, 18K	"	.93
Gold Wire, Round, 20K	"	1.01
Gold Wire, Half Round and Triangular, 18K	"	1.00
Gold Wire, Half Round and Triangular, 20K	"	1.06
Gold Spiral Springs, 10K	"	.80
Gold Spiral Springs, 18K	"	1.15
Gold Spring Attachments, 4 in a set, per set, $6.00	each,	1.50
Gold Clasp Wire	per dwt.,	1.02
Gold Ligature Wire	"	1.25
Silver Plate, Pure	per oz., $ .95; "	.06
Silver Plate, Coin	per oz., .95; "	.06
Silver Solder	per oz., .80; "	.05
Silver, Granulated	per oz.,	.95
Silver, Precipitated	"	1.50
Silver Springs	each,	.25

PLATINUM.—The prices of platinum plate, platinum wire, round, square and triangular, platinum and iridium plate as well as platinum and iridium wire, round, square and triangular, all of which we carry in stock, fluctuate, but will always be supplied at current market rates.

ALL PLATES CUT TO PATTERN $0.05 PER DWT. EXTRA.

Allowance for Scraps.

We allow the highest market value for every grain of Scrap sent to us. We do not aim to make a profit of one single penny in any transaction of this character. We allow for all Scrap sent to us just exactly what we get for it at the United States mint. We will cheerfully estimate the value of any Scrap in advance of mailing check or crediting account or exchanging for other goods.

Our Terms for Precious Metals.

Our terms for precious metals are absolutely and positively SPOT CASH without exception. We have no choice about it. At the present greatly reduced prices there simply isn't enough margin in the goods to permit us to put them on our books without an actual loss.

Cleansing Paste for the Hands.

There are few things made that will enable a dentist to go right straight from the laboratory bench to the chair and have his hands in the condition he would like them. This Paste is one of them. It will do the business. Does not require much—just a little—just a pinch. It not only is good for an emergency, but, used all the time, keeps the hands in perfect condition. It is one of the little luxuries that becomes a necessity when once used.

Price, per box, 30 cents; per doz. $3.00

OUR GOLD PLATES

20 DWT. OR 30 GAUGE.

. . . 18, 20, 22 and 24 Karat

Are preeminently superior to every other brand on the market.

For Crown Work [illegible] Science, are put in envelopes [illegible]

10 DWT. 30 GAUGE

5 DWT. 30 GAUGE

4 DWT. 30 GAUGE

They are uniformly SOFT and TOUGH, MIRROR FINISHED and of the RICHEST POSSIBLE COLOR.

The Leading Gold Workers throughout the Country speak in highest terms of NEY'S GOLD PLATES and SOLDERS, and Dentists using them can rely on getting the best that can be produced.

PRICES.

	Per DWT.
Gold Plate, 18 k.	$ .87
" " 20 k.	.97
" " 22 k.	1.05
" " 22 k. Light Color, Soft,	1.05
" " 23 k. Discs as per margin,	1.07
" " 24 k.	1.10
Gold Clasp,	1.00
Clasp Metal, Platinum and Gold,	1.10

For Sale at all the Leading Dental Depots.

Gold Discs.

No. 14

We can furnish Gold Discs, any Karat or gauge desired, to fit perfectly the holes in the Morrison Plate.

SIZES as shown:

No. 15

No. 16

No. 17

No. 18

Our Gold Solders.

Put in envelopes as illustrated above are rapidly taking the lead over every other brand on the market.

Dentists, always quick to appreciate a really good article, find in **NEY'S SOLDER** one of **GREAT STRENGTH,** and at the same time **SOFT** and **EASY FLOWING.**

Another most important feature is the **COLOR,** which, if used in connection with our Plates of corresponding Karat, will be found entirely satisfactory. We would ask a trial that you may be convinced of its superiority.

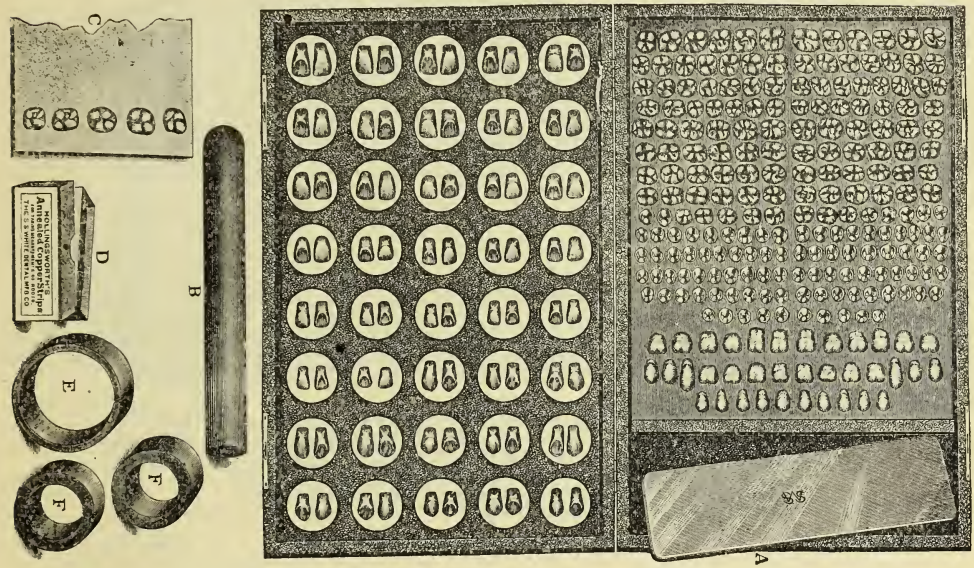
PRICES.

						Per Dwt.
Gold	Solder	for	14 k.	plate,	.	$ .65
"	"	"	16 k.	"	.	.75
"	"	"	18 k.	"	.	.85
"	"	"	20 k.	"	.	.95
"	"	"	22 k.	"	.	1.00

FOR SALE AT ALL THE LEADING DENTAL DEPOTS.

THE KELLOGG & BULKELEY CO., HARTFORD, CONN.

The Hollingsworth Crown and Bridge Work System.



This system comes pretty near making Crowns and making Bridge Work by machinery. The method is simple. The results accurate and artistic. Limited space prevents a full description of the system. We have a pamphlet on this subject of great value; send for it. there is no charge. It tells all about the system from start to finish. It is full of little tricks. It is just about sure to effect a sale of all or part of this outfit. Then if not handy to our depot, and the reference is satisfactory and you would like to see the set itself, say the word and we'll cheerfully send it. It generally stays. That is one reason we are so willing.

PRICES.

Set No. 1, complete as shown	$18.00
Set No. 2, consisting of cusps for bicuspid and molar crowns only, in separate cases	13.00
Set No. 3, consisting of forms for incisor and cuspid crowns only, in separate cases	9.00
A.—Casting Plate	.75
B.—Carbon Stick	.06
C.—Asbestos Pad	.20
D.—Copper Strips, per box,	.12
E and F.—Rubber Rings, each,	.10

Hollingsworth's Contouring System.

There is no plier made that can properly contour a gold crown. In the Hollingsworth System the band is fitted to the root. It is heated and burnt into wooden block. One of these 72 forms (which are copied from nature) is selected, placed in the crown, and with the small press is forced into the band. This contours it without changing shape of the fitted neck. That is all there is to it. The method can be utilized in almost any system of gold crown construction.

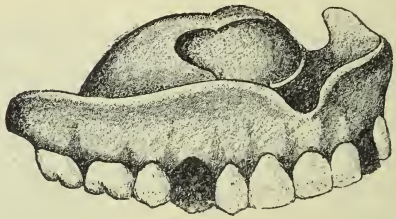
The set consists of 72 Contouring Forms in Folding Case, 1 Pair Pliers, 1 Screw-Press. 5 Hard-wood Blocks.

PRICES.

Set, complete	$9.00
Screw-Press	1.00
Hard-wood Blocks, Set of 5	.25
Band Pliers	.25

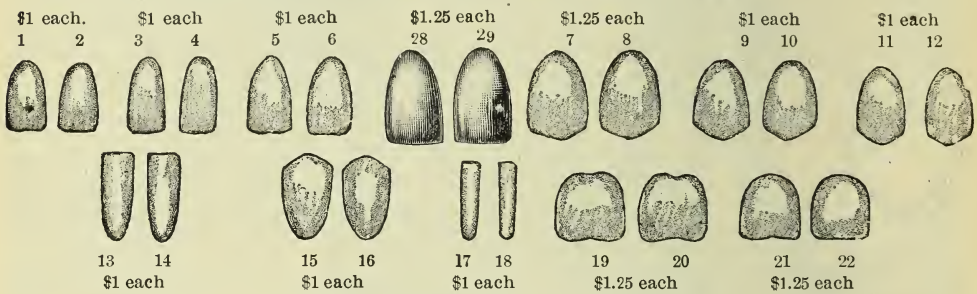
The Nelson Gold Teeth as they appear on Rubber Work.

The different styles, sizes and lengths of our teeth usually required by dentists, are indicated by the following cut or diagram. The cut shows the exact size of each tooth. They can be made a little narrower by pinching together or a little wider by spreading, which will in no wise impair the beauty or utility of the tooth. There are but two prices, viz., $1.00 and $1.25 per tooth.



The Nelson Gold Teeth, since they were first put before the Dental Profession, have quickly found a place in all Dental Offices. While they are intended to give strength and beauty to rubber plates, and perfectly imitate crown and bridge work, they are also most useful for dummies in gold bridge work. These diagrams are to be had at all Dental Depots.

Bicuspids and Molars, full cutting surface, each, $1.30



Patrons will please order by number only.

The Nelson Gold Tooth Co.,
No. 9 W. 14th Street, New York.

Dr. W. H. Baird's Method for Crown and Bridge Work.

The device consists of a Swaging Pliers, the jaws of which open parallel to each other, the lower jaw being grooved to admit the slides which carry the teeth-dies, of which there are 248, neatly put up in substantial plush-lined trays. These trays, with pliers and slides, are put up in a substantial plush-lined box, with catch-lock, making a convenient package.

The Dies are made of a SPECIALLY ALLOYED METAL, very hard and tough. With proper use they are practically indestructible. The selection of Dies is such that one of proper shape and size may be found to suit almost any case without the use of pliers to elongate or depress cusps, and no contouring will be found necessary if selection is properly made.

Price set, complete $20.00

The Morrison Seamless Crown Outfit.

Designed for forming seamless cap crowns, seamless collars and shells for all forms of crown and bridge-work. A seamless cap of the desired size is made by driving a disk of metal successively through the holes in the steel draw plate, and the cap given the desired tooth form in the die plate made specially for this method.

A seamless gold or aluminum cap crown for any molar or bicuspid can be made in a very few minutes.

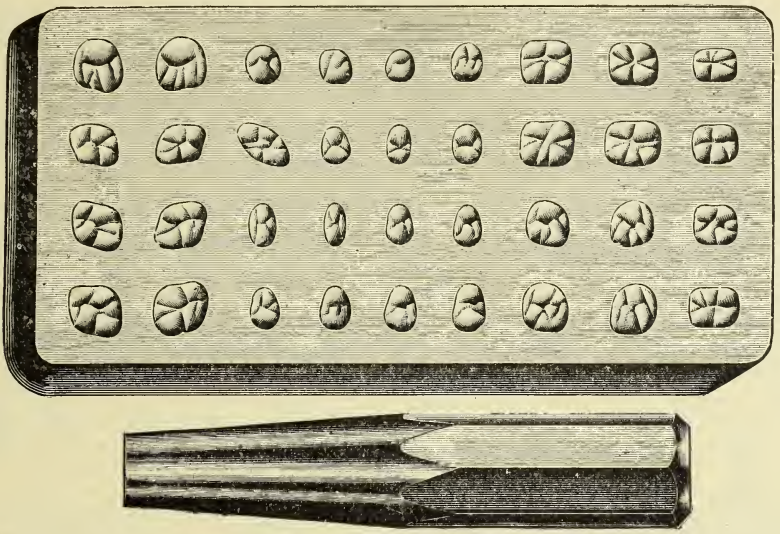
Water-tight dummies for bridges are obtained by making seamless crowns and soldering plate over the open end.

Incisor and cuspid crowns are made in two pieces in a fusible metal mould cast in the little square clamp.

Price $16.00

Mitchel's Steel Die.

For Cap Crowns and Bridge Work.



The plate is $6\frac{7}{8}$ inches long, $3\frac{1}{2}$ wide by $\frac{5}{8}$ thick. Made of fine steel, case hardened, highly finished and contains a variety of sizes and shapes (thirty-six), making it the most convenient die ever offered. Much time and material will be saved by having at hand a die the exact size needed. Being made of steel, it enables one to strike at once a solid gold cusp, if desired, by melting scraps into nuggets of convenient size and driving into the die selected. Or by covering the die with a piece of No. 32 gold plate and placing a leaden bullet thereon and driving into the die, a perfect shell results.

Full directions accompany each die.

Price $6.00

Dr. Geo. W. Melotte's Improved Gold Crown Dies.

The notable points claimed by Dr. Melotte for his set of Improved Crown Dies are convenience and compactness. The set consists of sixteen dies and a handle or holder. The die-heads are provided with a shank to fit the socket in the holder, in which it is held securely by a spring. The die heads are of bronze, the handle of steel.

The set is put up in a neat case about 6 by $3\frac{1}{4}$ by $1\frac{3}{8}$ inches.

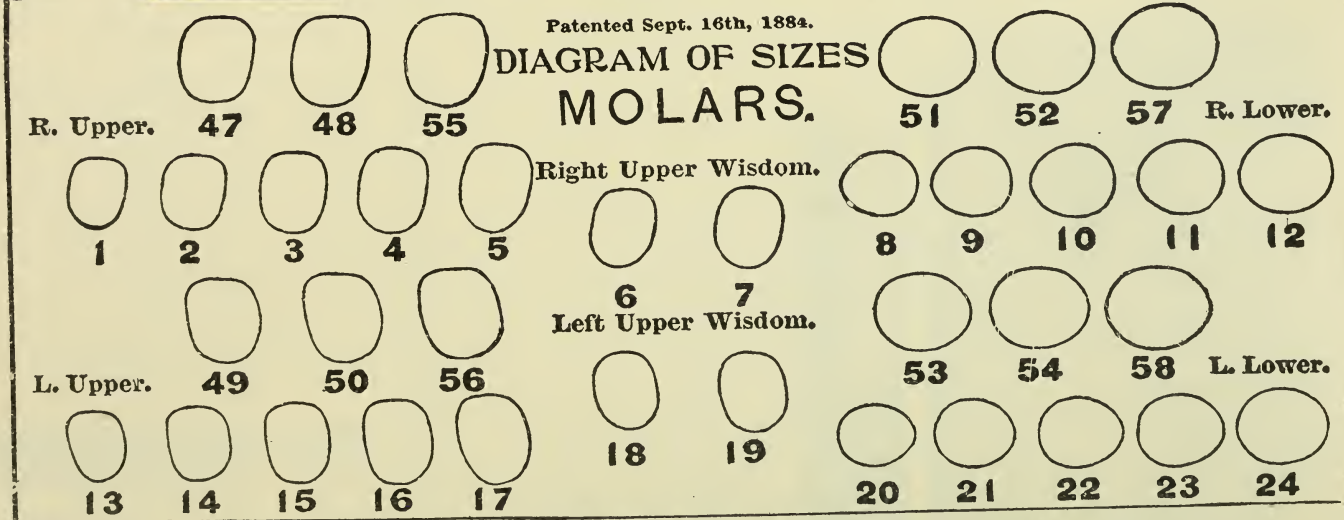
Price, per set.....$6.00

THE RYNEAR CROWN.

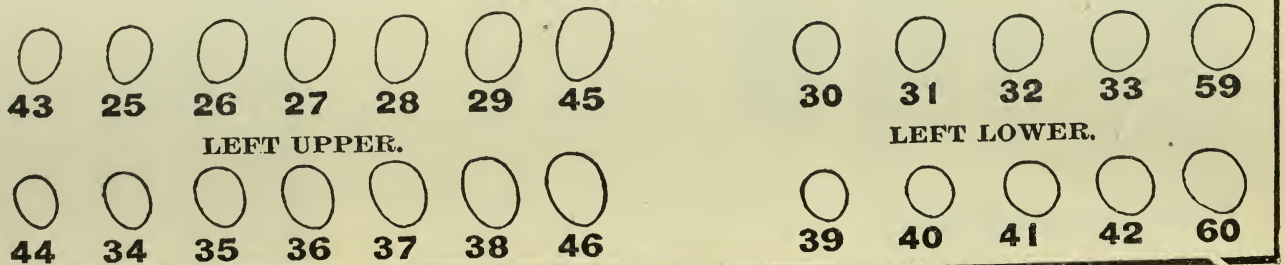
Patented Sept. 16th, 1884.

DIAGRAM OF SIZES

MOLARS.



BICUSPIDS.



The Reynear Gold Crown.

Lee S. Smith & Son, Sole Agents, Pittsburg, Pa.

The chart on opposite page shows the sizes of the Rynear Crown. It is an utter impossibility to make an engraving that will do this crown justice. No dentist can construct crowns of better shape. The contour is perfect. They are the shape of the natural models they are made over.

The Rynear Crowns are seamless. They are made of 22 karat gold. The grinding surface is gauge 29, Stubbs. The bands are gauge 31, Stubbs.

The Rynear Crowns are always the same. They are absolutely uniform.

We don't believe any case can be found that we cannot fit from this set of 60 Crowns. They vary in diameter only one thousandth of an inch, from abnormally small to abnormally large of each class. All of these Crowns are made of extra length.

If the name "Rynear" isn't printed on the label bearing the number of the crown, the crown isn't a Rynear crown. That means it isn't as good a crown. The name Rynear is printed on the label for the protection of dentists who want the best.

PRICES.

Molars, 22 karat gold.....each, $2.50
Bicuspids .....each, 2.00
Set complete, Crowns, in neat leather case.....$125.00
Crowns of 24 karat gold made at a cost of $1.00 extra per crown.

THE EVANS GOLD SEAMLESS CONTOUR CROWN

A STANDARD ARTICLE OF MANUFACTURE.

The Best in Quality

Being of heavier gauge of plate and higher grade of gold (23¼ carat), than any other manufactured.

The Most Practical

For the reasons that they are alterable, and the shapes and forms presented are the result of years of study and experience in the requirements of crown-work.

The Greatest Variety of Form

As the full set numbers 265 sizes and forms, which is three times that of any other crown manufactured.

A new chart of sizes and forms of this crown, together with general directions, sent to any address.

In ordering, the best method is to send a small model of the prepared root or tooth.

PRICES—BICUSPID CROWNS, all sizes, $2 00. MOLAR CROWNS, all sizes, $2.50.

The above prices place these crowns to the profession at figures on an average less than the cost of gold required to form crowns by the ordinary methods in use.

The surface of this gold does not oxidize or lose its lustre when annealed. This characteristic property enables the dentist to distinguish the EVANS GOLD SEAMLESS CONTOUR CROWN from all other makes composed of cheaper grades of gold.

For sale by the manufacturer, to whom orders can be addressed. (Cash has to accompany orders, or goods will be sent C. O. D.) Also by the S. S. WHITE DENTAL MFG. CO. and Leading Houses in Dental Supplies.

In the EVANS GOLD CROWNS **more value in gold is given the dentist and less profit made, than on any Gold Crown on the market. Do not be induced to accept substitutes.**

EVANS COMPANY, Manufacturers, 55 West 39th St., New York City.

Aluminum Crowns.

Aluminum Crowns, all sizes.....each, $0.75
Aluminum Crowns, 25 or more at one time.....each, 0.65

Gold Crowns and Bridge Work to order.

If there is one department of our business that has developed more than another during the past few years it is this department. Our service in this direction has grown without advertising. It has grown simply because our customers for whom we make crowns and bridges get better results than when they send them elsewhere.

We don't mean to say we do work of this kind ourselves, but we do mean to say if we did the work ourselves it couldn't be done any better, and that is a pretty high standard.

There are numbers of Prosthetic Dentists here in the city. Some of them do work for other dentists, some of them do work exclusively for us. When a case comes to us we know the man who can do that particular piece of work better than anybody else can do it. We send the case to him and have personal supervision over the work. It must be right before it passes our inspection. It doesn't cost us a cent to have it done over if it isn't right. It is usually right. We believe we are more particular about the grade of work sent in our care than the man who sends it. It always satisfies.

Our prices are right. They are the same to a penny as the prices charged by the man who does the work. Our customers don't have to pay extra for our supervision.

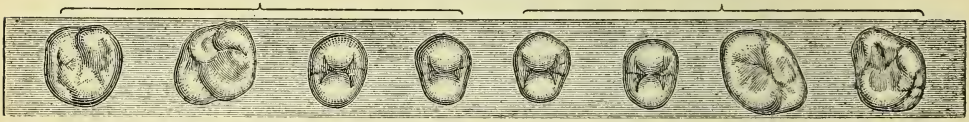
We know what it means to be disappointed in receipt of this special work. When this work is sent to us the case is always back when we say it will be back. Our returns are always prompt returns. Every order is a rush order.

PRICES.

Gold Crowns, laterals, centrals and cuspids, to order only .....each, $3.00
Gold Crowns and Bridge Work estimated on receipt of model.

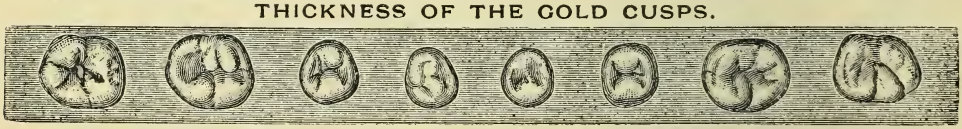
Solid Gold Cusps for Crown and Bridge Work.

RIGHT. UPPER. LEFT.



1	2	3	4	5	6	7	8
$2.50.	$2.75.	$2.00.	$1.60.	$1.60.	$1.60.	$2.75.	$2.50.

THICKNESS OF THE GOLD CUSPS.



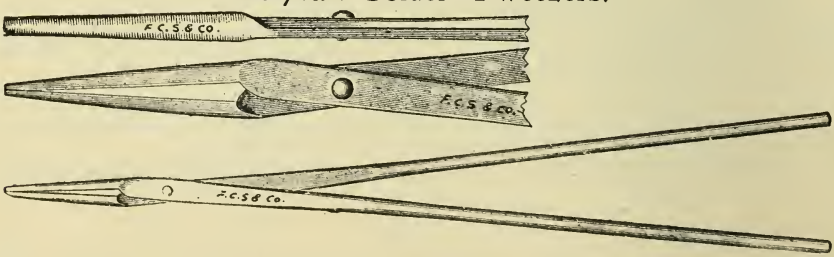
9	10	11	12	13	14	15	16
$2.50.	$2.50.	$1.40.	$1.40.	$1.40.	$1.40.	$2.75.	$2.50.

RIGHT. LOWER. LEFT.

Complete set of Sixteen.....$33.00

Made of 22-carat gold, and designed to be soldered to seamless or other gold bands fitted to the natural tooth-roots, in the mouth, forming a cap-crown. Also intended to form the masticating surfaces of porcelain crowns in bridge-work.

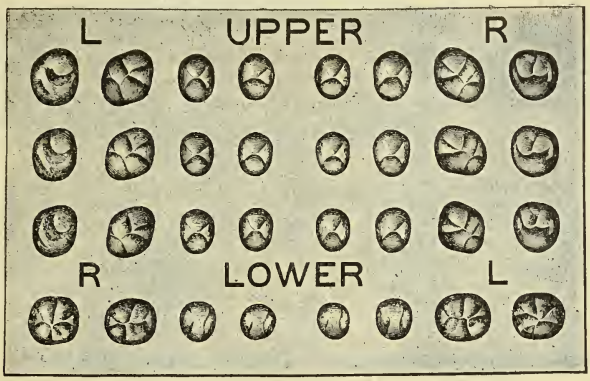
Belyea's Solder Tweezers.



These Solder Tweezers are made long and slender in order to afford extreme delicacy of manipulation. The least pressure at the ends of the handles holds the solder or collar, and the slighest movement of one or both handles releases it. The extreme tips of the beaks are the working point. The illustration shows the appliance about half size, with beaks exhibited full size in the side cut. The full length is 8½ in. Dull nickeled.

Price,.....each, $0.30

Improved Crown Die-Plate and Hub-Mould.

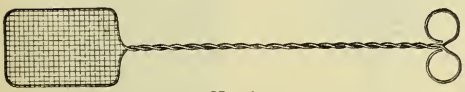


The Die-Plate contains 32 depressions, 16 molars and 16 bicuspids. It is made of a special hard metal. The Hub-Mould is made of cast iron. Full description and directions for use accompany each apparatus.

PRICES.

Die-Plate $3.00
Hub-Mould 1.00

Wire Soldering Frames.

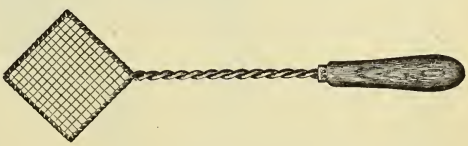


No. 1.

For soldering gold crowns or small bridge pieces. The flame passes through the meshes of the wire readily, so that all parts of the piece can be heated evenly. Crowns are thus soldered without changing. Small bridge pieces can be held over the flame for heating up as well as soldering.

The handle is eight inches long, so that there is no inconvenience from the conduction of the heat to the hand while manipulating the frame.

Price ..... each, $0.15



No. 2.

This Frame is suitable for holding the largest pieces of crown and bridge-work. The whole instrument is 16 inches long, the net frame is 3½ inches square.

The wood handle protects the hand under any degree of heat that may be required in soldering.

Price $0.50

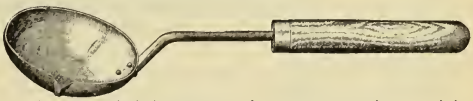
Copper Acid Pan.

Improved.

The improvement consists in enlarging the Pan, making it of thinner copper, and therefore lighter, and stiffening it by a rib around the center. No change in price.

Price $0.75

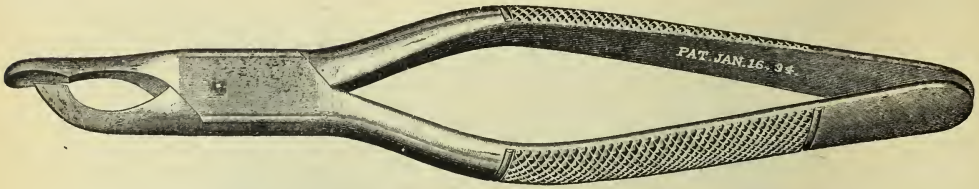
Copper Ladle.



A dental laboratory is not complete without a handy, serviceable ladle for melting and pouring fusible metals, like Melotte's or Weston's. This Ladle is made with a copper bowl 3 inches in diameter (cut half size), and wood handle 7½ inches long. A neatly turned lip facilitates pouring.

Price $0.35

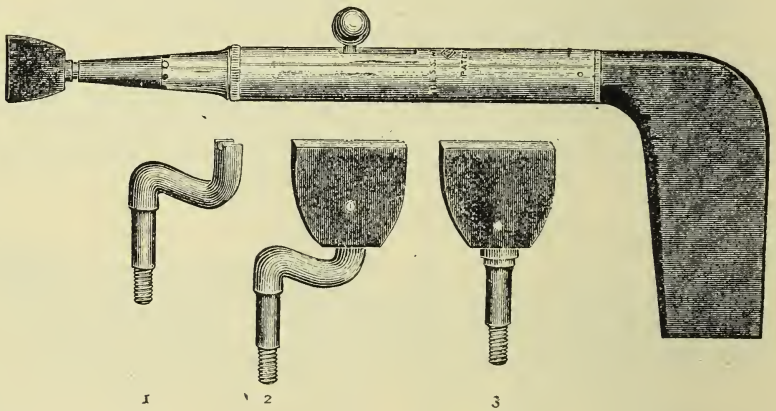
Cap-Crown Slitter.



The sharp-pointed knife-blade beak is placed under the cervical edge, and the elongated beak on the cuspid end of the crown, which is then easily slit lengthwise by simply compressing the forceps handles. A cap-crown or bridge anchorage may be quickly removed in a way that admits of replacement after bringing together and soldering the edges of the slit crown. The handles of this instrument are of the form known as Common-Sense.

Price $2.50

Hollingsworth Crown Driver.



The action of the appliance is that of the spring mallet. A hard rubber handle set at right angles affords a secure hold, with the trigger of the spring to the thumb or forefinger by either of which it can be operated. The illustration of the complete device is half size, while the buffers are shown full size.

Price, complete, with three Buffers, as shown $2.00

Crown Driver and Pull-Off.

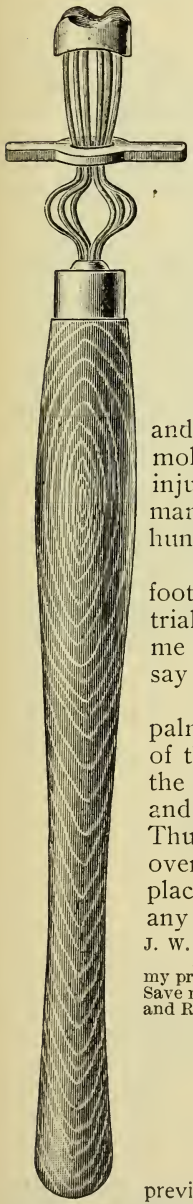
The cut shows all parts 2-3 full size.

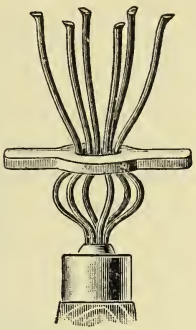
Two sizes of sockets and buffers. Gold crowns are not marred by the soft buffers. The double bayonet form affords access to molars as well as centrals, and porcelain crowns can be sent home without risk of fracture.

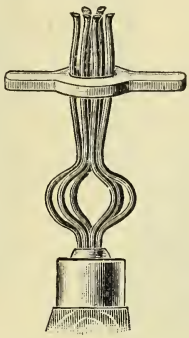
Price, complete $2.50

The Gold Crown and Band Holder.

(Patented June 29, 1897.)
Designed by Dr. Burgess of Baltimore.







To hold Crowns and Bridge Sections while being polished.

An indispensable article in any dental office where Crowns and Bridges are made. It will hold any crown from the largest molar to the smallest lateral, with no danger of splitting or injuring the crown, whereby the polisher has complete command of the work. One instrument will do the work of a hundred whittled pegs of wood, and will last a life-time.

A Word as to Price—75 cents.—There are six distinct foot-shape points, which require accuracy. If, after six months trial, any man complains of the cost as exorbitant, let him write me to that effect, or let him try to put one together, and he will say that $1.00 would be cheap.

How to Use.—Grasp the handle of the Holder in the right palm. Hold firmly, then with the end of the thumb and side of the forefinger force the slide to the centre of the curve on the wires, assisting with the left hand, to compress the points and prevent the slide from going off the ends of the wires. Thus you compress the foot-shape points to a centre; place over the points the crown and let the slide fall back gently to place; the crown is held by the springs firmly and securely for any filing and polishing required.

J. W. Ivory, Philadelphia.

Dear Sir:—Having used the Burgess Crown Holder for about two years, both in my practice and in clinics at College, would say it is a most useful little instrument. Save many times its cost in time on every crown. Is equally good for holding shell and Richmond Crowns.

Very truly yours,
Geo. E. Hardy,
Dem. Mech. Dentistry, Baltimore College of Dental Surgery.

Price.....75 cents.

Burgess Band Former.

To be used instead of Pliers in getting gold formed into size of Root previous to soldering.

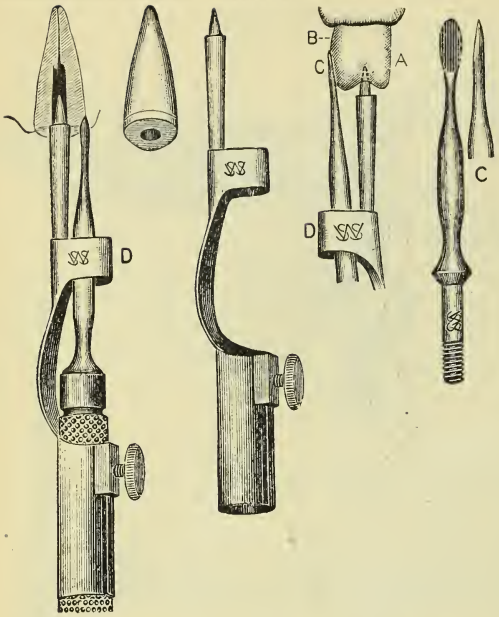
PRICE.

Metal.....$1.00
Ebony Wood..... .75
Other Woods.....from .30 to .50

Manufactured and Controlled by

J. W. IVORY,

51 North Tenth Street, Philadelphia, Pa.



Root and Crown Reducer.

The pictures tell the whole story of this device. The guide D fits over a cone socket handle, while the cutting instrument "C" is a cone socket point. The instrument will follow and dress the periphery of roots of irregular outline. Made only for Cone Socket Handles (No. 3 Knurled is the best one to use.)

PRICES.

Root and Crown Reducer, complete, $1.75

PARTS SEPARATELY.

Adjustable Pintle and Guide 1.15
Abrader ..... .45
No. 3 Knurled Cone-Socket Handle.. .15

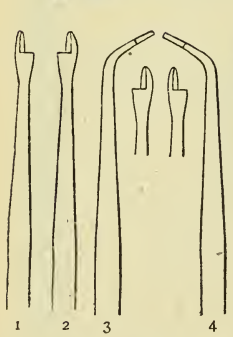
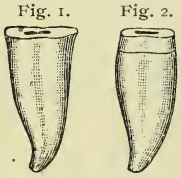


Fig. 1. Fig. 2.



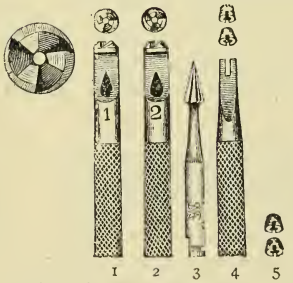
Root-Trimmers or Reducers.

The shoulder keeps the instrument on the root and limits the penetration of the spur, which, by its knife-edge, scrapes the side of the root, Fig. 1, so that it may easily and quickly be given the shape of Fig. 2, or any similar form. The straight pair, Nos. 1 and 2, for use on the superior roots anterior to the molars, and the curved pair, Nos. 3 and 4, for use on all the other natural roots.

Price ..... each, $0.45

Made for Cone-Socket Handles only.

Bryant's Bridge-Repair Tools.



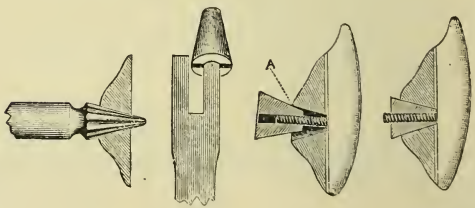


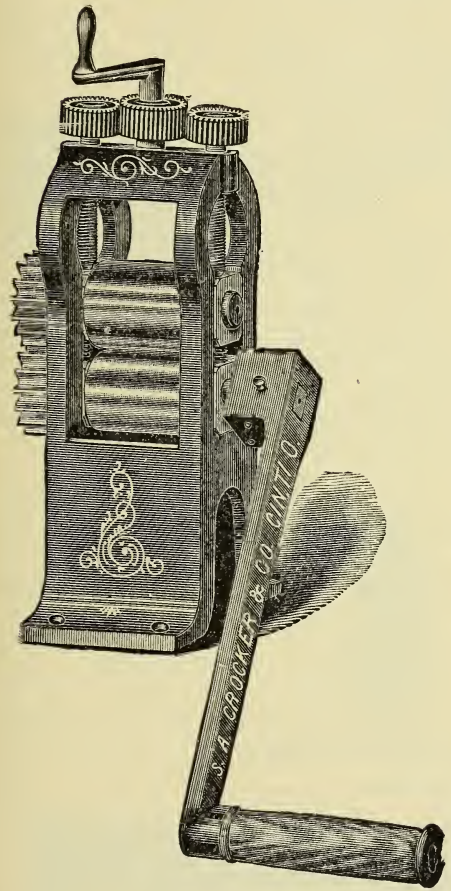
Fig. A. Fig. B. Fig. C. Fig. D.

To repair a bridge with the Bryant system drill holes in backing for pins. Thread pins first with instrument No. 1, then with No. 2. Countersink pin holes from rear with right angle instrument No. 3. Place tooth in position. Screw nuts, Fig. 5, in place with driver No. 4. Grind nuts flush with backing.

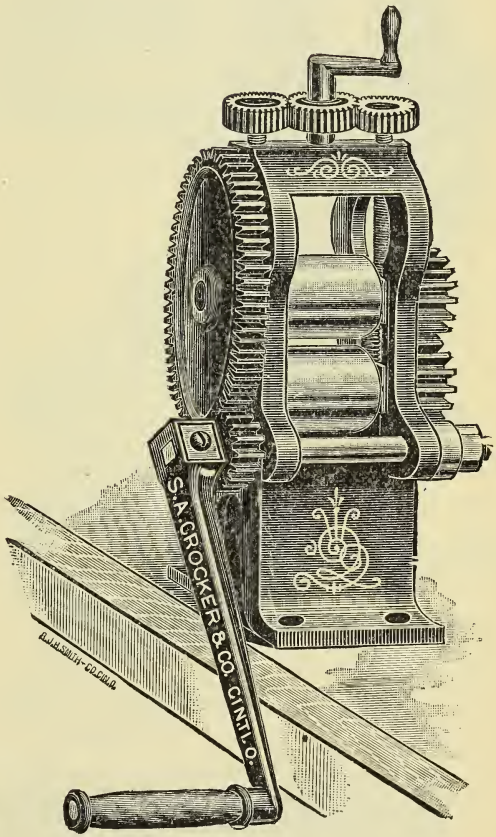
PRICES.

Tooth-pin Dies, Nos. 1 and 2 .....each, $0.75
Right-Angle Reamers, No. 3 ..... " .25
Nut-Drivers, No. 4 ..... " .25
Gold Nuts, No. 5 ..... " .50
The Set in box containing one each of Nos. 1, 2, 3, 4, and two of No. 5 ..... 3.00

Samuel A. Crocker & Co's. Improved Rolling Mills.



No. 3.



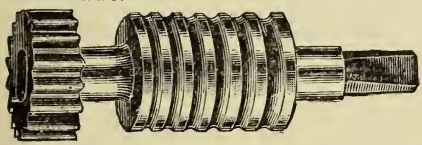
No. 4.

A good rolling mill is almost an absolute necessity in a first-class dental office.

A dentist can get along without a rolling mill, but he is losing a lot of money and a lot of valuable time in an effort to save the price of a mill.

There isn't any sense in a dentist selling his gold scrap for a penny less than he pays for it. With one of these mills he can work his scrap gold into new plate in his odd moments.

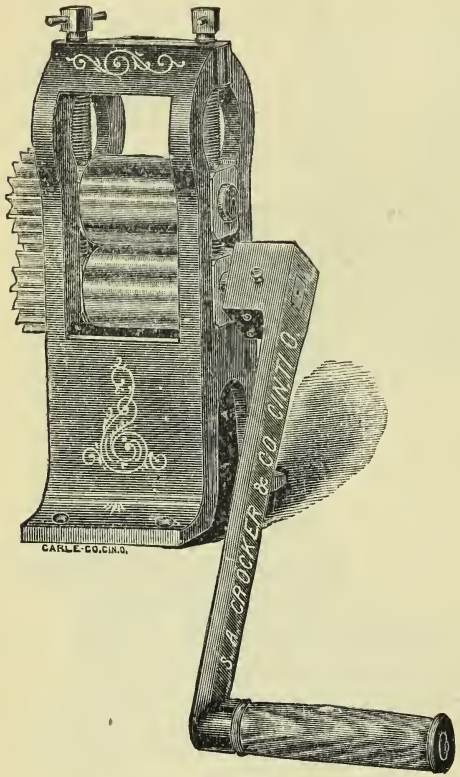
These rolls are finely finished and in point of quality are the equal of any roll made.



PRICES.

No. 3..... .....$25.00
No. 4..... ..... 35.00

Interchangeable Ring Roll, $10.00 extra.



Samuel A. Crocker & Co.'s Improved Rolling Mills—Continued.

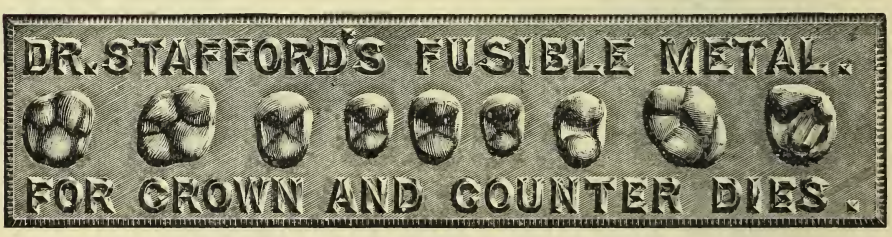
This is a simpler form of Rolls than shown on preceding page. It is just as well finished and will do just as good work, but lacks the cog system of adjusting the rolls.

Any of these rolls will pay for themselves in a short time.

Price, No. 2 ..... $20.00

Stafford's Fusible Metal Outfit.

Made by H. D. Justi & Son.



This preparation can be poured on its self or any preparation used in connection with fusible metals. In pouring this or any metal on its self do not have the metal too hot while pouring.

If skillfully manipulated this preparation can be poured into small modeling compound impressions, but they should be well oiled and perfectly cold.

Complete outfit consists of one steel ladle with wooden handle, one rubber ring, two bars of fusible metal and one tube of specially prepared wire for measuring roots and teeth to be crowned.

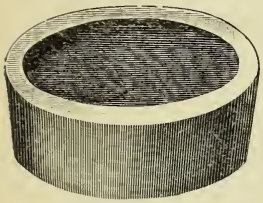
PRICES.

Complete Outfit	$1.25
Fusible Metal, per 3 oz. Bar	.35
Steel Ladle	.40
Copper Wire, per tube	.20
Flexible Rubber Ring	.05

Soldering Blocks and Pads.

Made by Buffalo Dental Mfg. Co.

No. 120. Carbon Soldering Block.



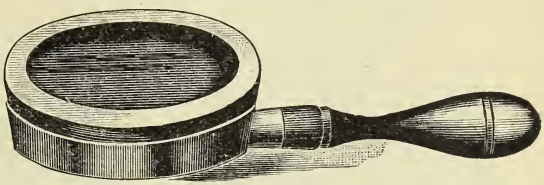
For supporting work under the blowpipe. Cleanly and perfect non-conductors.

They are circular, depressed on each face, and four inches diameter.

PRICE.

No. 120. Carbon Soldering Block, 25 cents.

No. 120a. Carbon Block Holder.



A very convenient device for holding Carbon Soldering Block.

PRICES.

No. 120 A. Carbon Block Holder $0.25
Carbon Block and Holder ..... .50

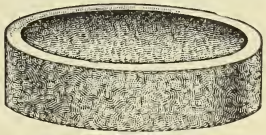
No. 121. Carbon Cylinder.

Made of the same composition as the Carbon Blocks. More cleanly than charcoal; the cupped ends being admirably adapted for soldering small articles, such as gold crowns, or for blowpipe assays. Size, 1⅛x3 inches.

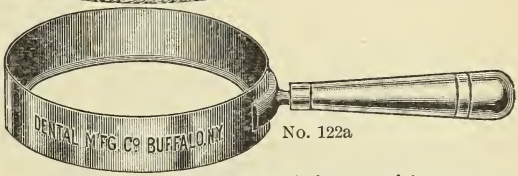
PRICE.

No. 121. Carbon Cylinder ..... 15 cents

Nos. 122 and 122a. Asbestos Soldering Block and Holder.



No. 122.



No. 122a

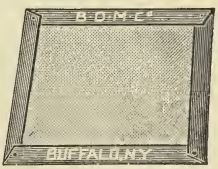
These Blocks have found favor with many in preference to Carbon Blocks for soldering purposes. They are made of first quality. A holder is supplied similar to the one used for holding Carbon Blocks, but with a flange to prevent block from falling through.

PRICES.

No. 122 Asbestos Block $0.60
No. 122 A. Asbestos Block Holder ... .25

Asbestos Pads.

For protecting the table during blowpipe operations. These are made from asbestos board, about one-fourth of an inch thick, and edged with iron.

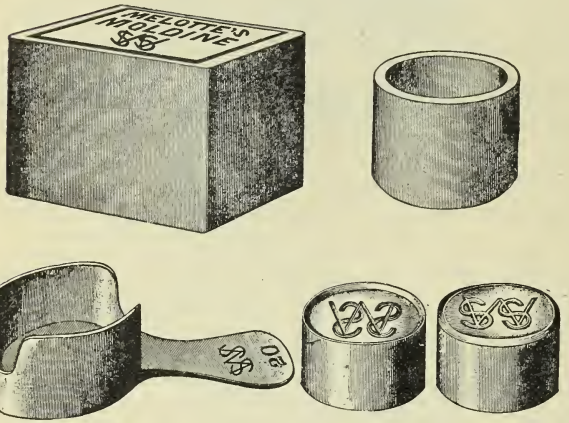


PRICES.

No. 00AP.	4	in. x 4 in. x ¼ in.	.....	$0.10
No. 0AP.	8	in. x 8 in. x ¼ in.	.....	.40
No. 1AP.	6½	in. x 10 in. x ¼ in.	.....	.50
No. 2AP.	10	in. x 13 in. x ¼ in.	.....	.85
No. 3AP.	13	in. x 20 in. x ¼ in.	.....	1.50

Dr. Melotte's Moldine, Impression Cup, Ring and Fusible Metal.

For Crown Dies and Counter Dies.

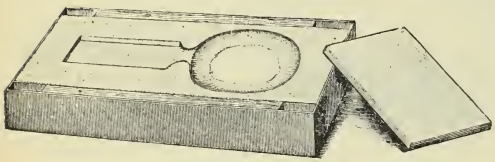


Here is the complete outfit. No dentist who is doing crown and bridge work can afford to be without any part of it. A die and counter die may be made of one or two teeth in four minutes Moldine is an immediate investment. Solder will not flow over the inside of a collar filled with it.

PRICES.

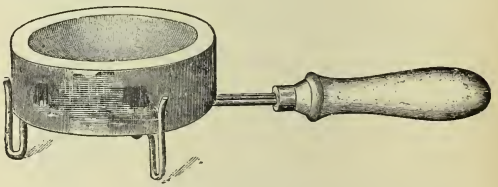
Complete Outfit, inclosed in a tin box containing one-half pound Mouldine, one Impression Tray, one Ring, and two ingots of Fusible Metal $1.25
Melotte's Moldine .....
.....per half pound .40
Impression Cup (S. S. W. No. 20) .... .25
Rubber Ring ..... .05
Fusible Metal, per ingot (about 2½ ounces) ..... .30

Asbestos Soldering Blocks.



No. 1. Asbestos Soldering, Melting, and Ingot Block, 6 inches long, 2½ inches wide, ½ inch thick. Put up in a tin box with directions for use.

Price $0.50



No. 2. Asbestos Soldering Block, 4½ inches diameter, 1¾ inches high. Concave top, with or without holder.

Price, No. 2, with Holder $0.85
Price, No. 2, without Holder ..... .60
Price, Holder separately ..... .25

Asbestos Mats.

Circular Mats, made of solid asbestos, ¼ inch thick. Made in two sizes, 4½" and 9" diameter.

Price, large size .....each, $0.15
Price, small size ..... " .08

Asbestos.

Fine (Powdered) .....per lb., $0.15
Coarse (Long fibre) ..... " .30

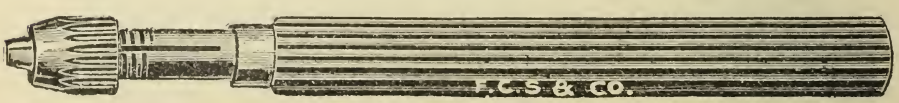
Borax Slate.

This slate consists of a shallow, saucer-shaped glass dish with a ground surface let into a wooden block, which has a metal cover.

Price $0.35

Pin Vise No. 1.

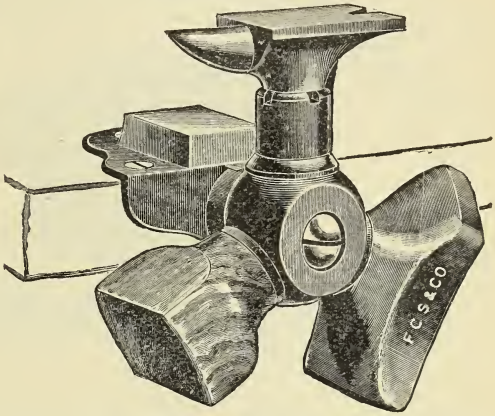
(See price on page 485.)



Bench Block.

Cast iron frame, with par vulcanized rubber block, two sizes; the large size is 5 inches long over all by 2¾ inches wide. The small size is 4⅜ inches long by 1⅝ inches wide.
Price, either size.....each, $1.25
Rubber Blocks, separately..... " .35

Revolving Combination Anvil and Bench Block.

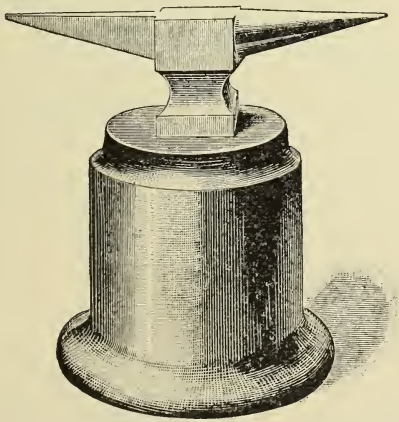


This combination tool consists of a hub carrying a case-hardened steel anvil, a par-vulcanized rubber block for filing, and a wood block for the same purpose.
Price, complete.....$3 00

DUPLICATE PARTS.

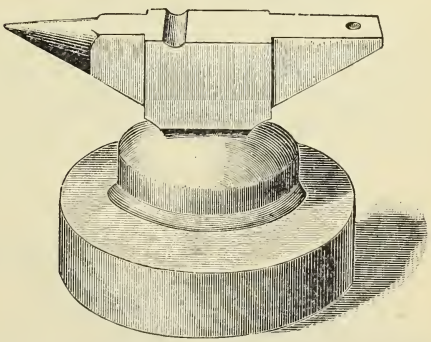
Brackets.....each, $0.50
Anvils..... " 1.00
Rubber Blocks..... " .35
Wood Blocks..... " .15

Anvil for Crown and Bridge-Work.



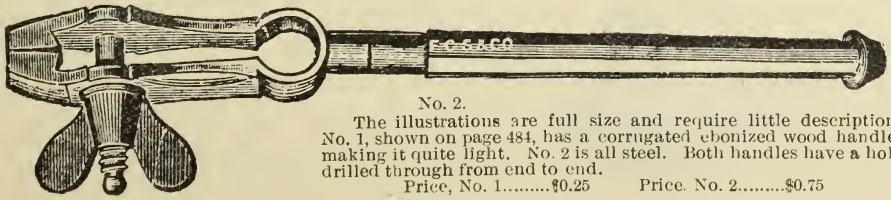
The length of the anvil varies from say 3 to 3½ inches; the height is about 3¼ inches; weight, 1½ lbs.
Price, with Base, as illustrated.....$1.00
Price, without Base..... .40

"Dentist's" Anvil.



The anvil is 4 to 4¼ inches long, 1¼ inches wide, and about 3½ inches high. The weight is ample, varying from 2½ to 2¾ pounds.
Price.....each, $1.50

Pin Vise No. 2.



No. 2.

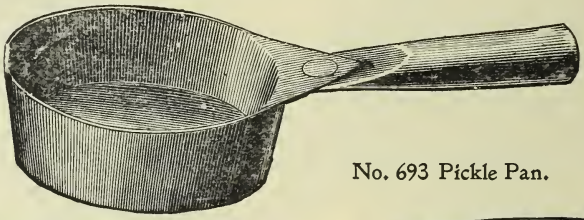
The illustrations are full size and require little description. No. 1, shown on page 484, has a corrugated ebonized wood handle, making it quite light. No. 2 is all steel. Both handles have a hole drilled through from end to end.
Price, No. 1.....$0.25 Price, No. 2.....$0.75

Copper Pickle Pans.

Made by The Buffalo Dental Mfg. Co.

No. 693. For boiling out gold work after soldering. Made of very heavy copper. Will last a lifetime.

No. 394. A cheaper article; shallow and of light copper.



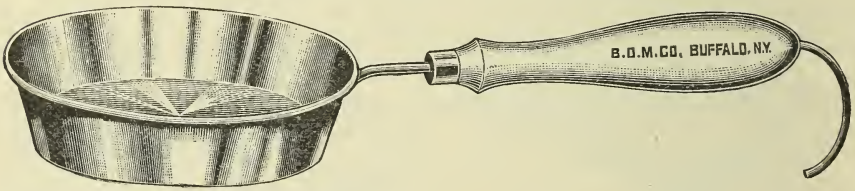
No. 693 Pickle Pan.

No. 394 Pickle Pan.

PRICES.

No. 693. Copper Pickle Pans, 3½ inches diameter $1.00
No. 394. Copper Pickle Pans, 3½ inches diameter ..... .40

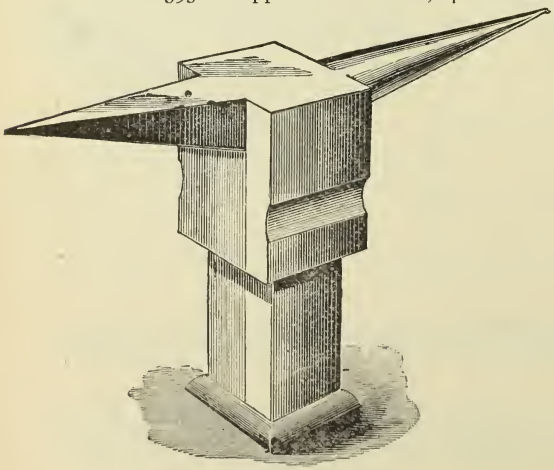
No. 395. Copper Pickle Pan.—New Pattern.



This pan has many desirable features. It is made of heavy spun copper, 4 inches diameter on the top, 3 inches on the bottom, and 1¼ inches high. The size is sufficiently large to admit a full piece of bridge work. The pan is riveted to a stout brass wire that extends entirely through a wood handle, terminating with a hook which serves a double purpose, that of allowing the pan to be hung up, and also of maintaining it on a level when placed on a bench, making it impossible to upset the pan.

PRICE.

No. 395. Copper Pickle Pan, 4 inches diameter $0.75

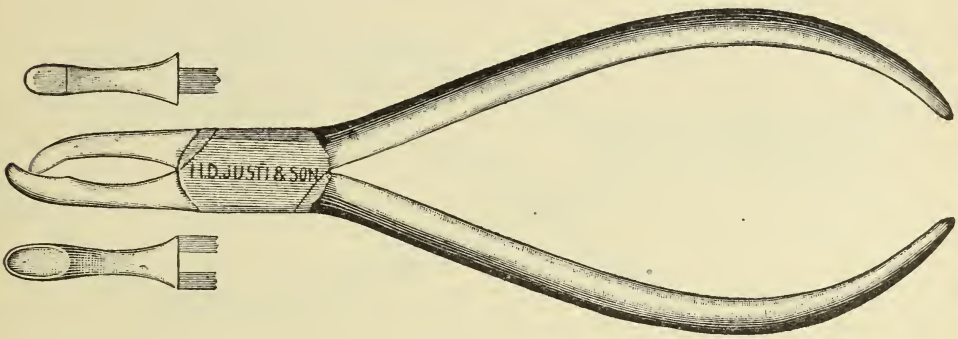


Steel Anvils.

PRICES.

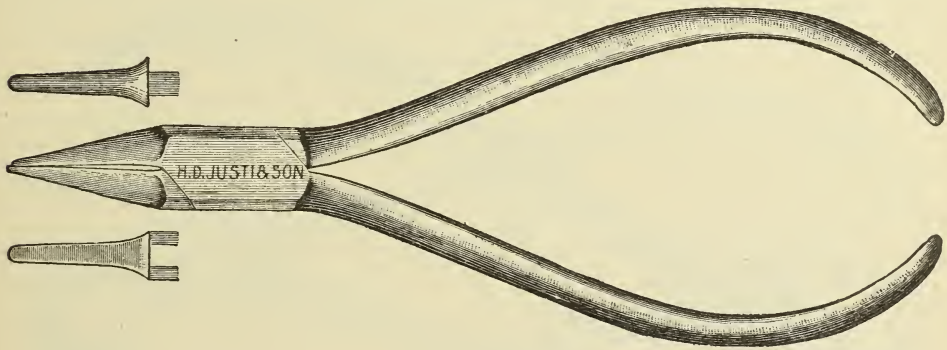
No. 1. Polished, to hold in vise $0.50
No. 2. Polished, same as No. No. 1, but mounted on iron base 1.00

No. 7. Dickinson's Contouring Pliers.



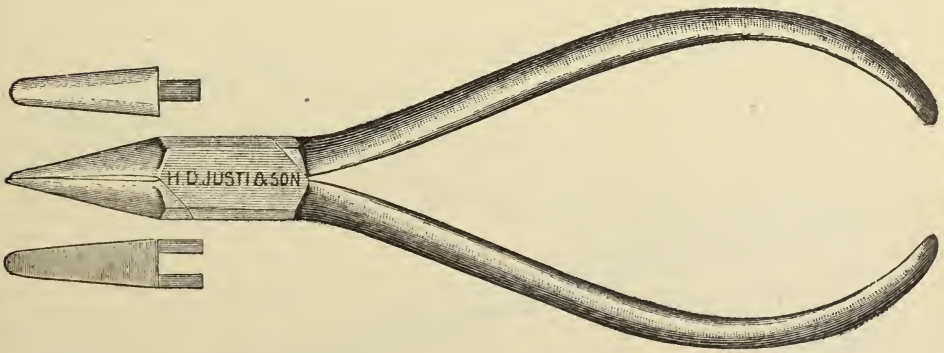
No. 7 Pliers $1.50

No. 8. Robinson's Collar Pliers.



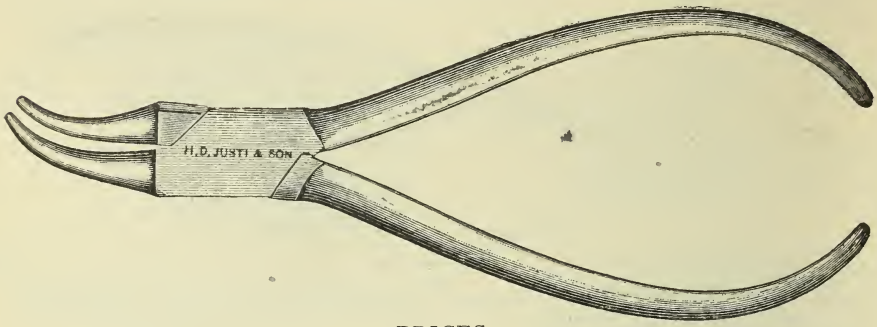
No. 8 Pliers $1.50

No. 9. Peeso's Pliers.



No. 9 Pliers $1.50

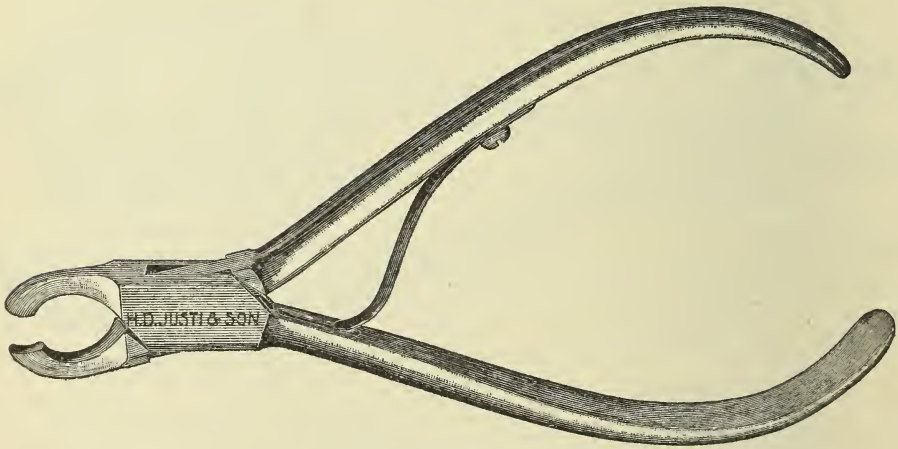
No. 4. Burchard's Contouring Pliers. (Curved.)



PRICES.

No. 4 Pliers, 4½-inch $0.90
No. 4 Pliers, 5-inch 1.00

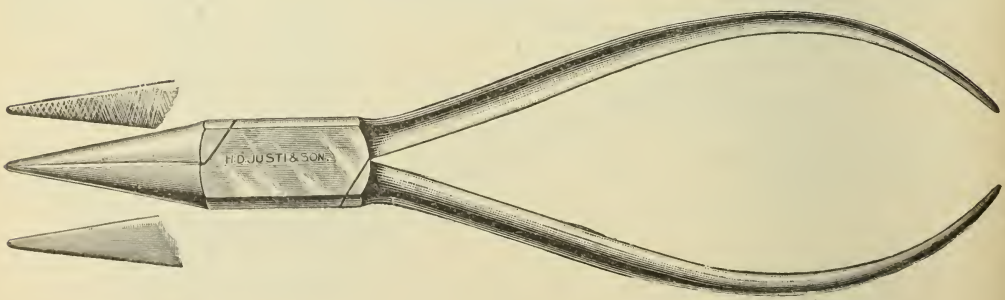
No. 5. Lane's Contouring Pliers.



No. 5 Pliers $1.75

No. 6. Universal Contouring Pliers.

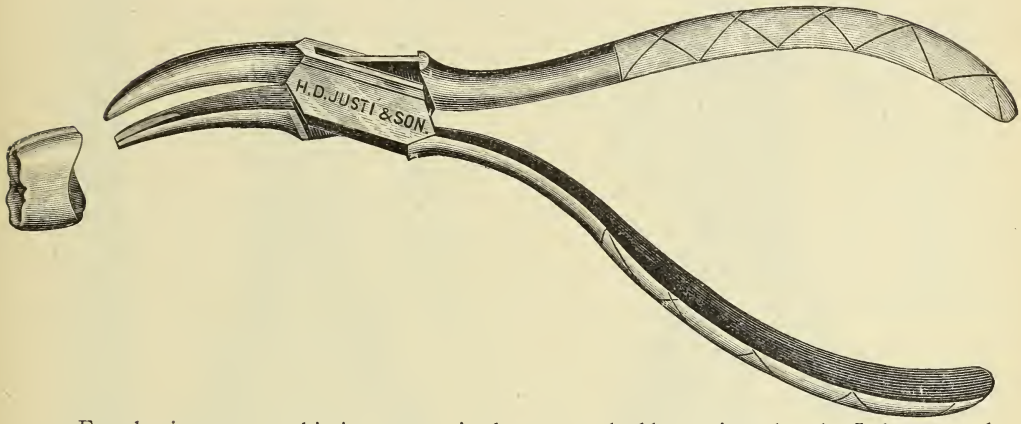
Devised by Dr. H. J. Goslee.



No. 6 Pliers $1.50

No. 1. Crown Contouring Pliers.

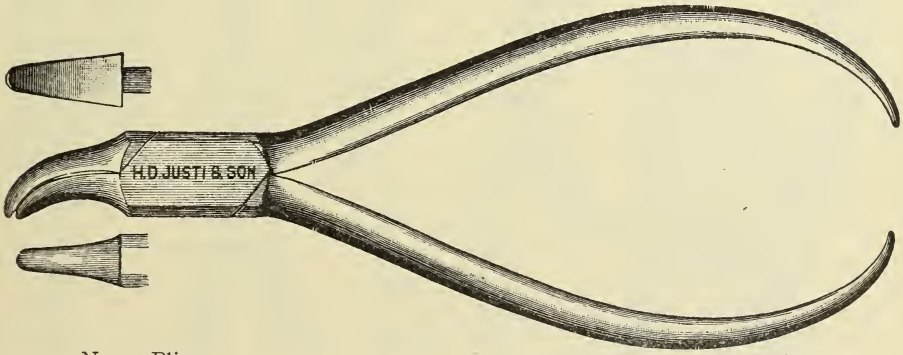
Made by H. D. Justi & Son.



For shaping crowns this instrument is the most valuable yet introduced. It has curved, oval and concave beaks, and is adapted to any part of the crown band.

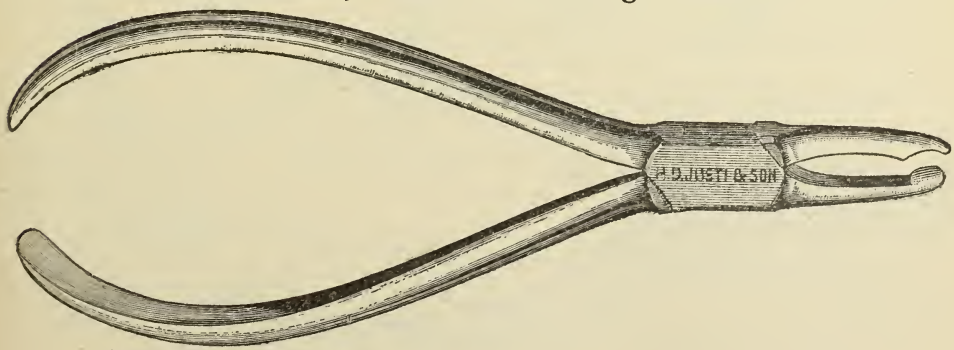
No. 1 Pliers ..... each, $1.50

No. 2. Reynold's Contouring Pliers.



No. 2 Pliers ..... each, $1.50

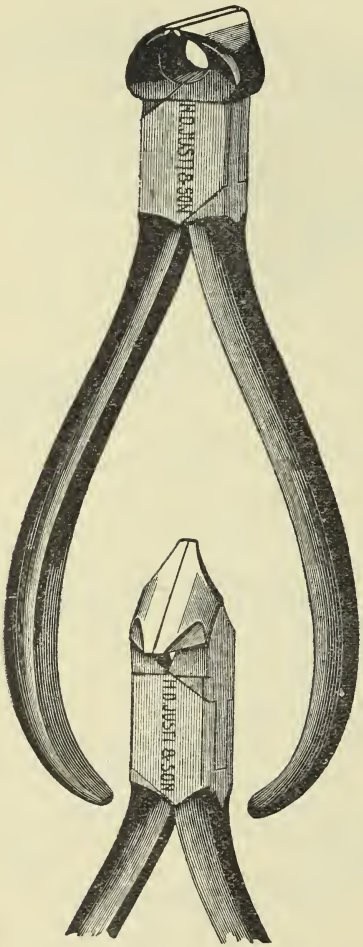
No. 3. Johnson's Contouring Pliers.



No. 3 Pliers ..... each, $1.50

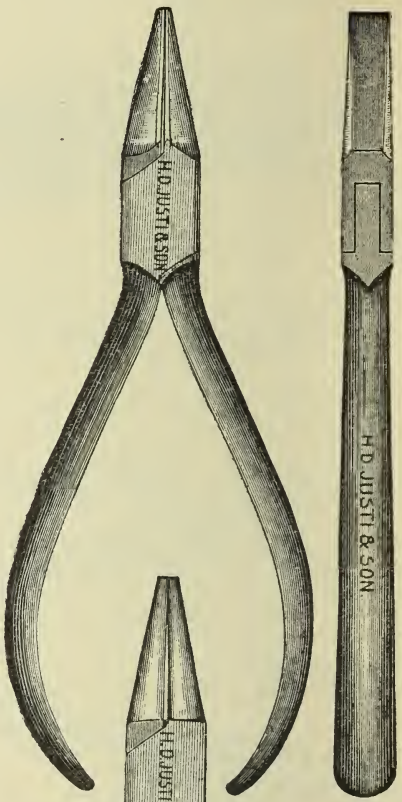
Solid Steel Pliers and Nippers.

No. 10. Front.



No. 11. Side.

No. 12. Flat.

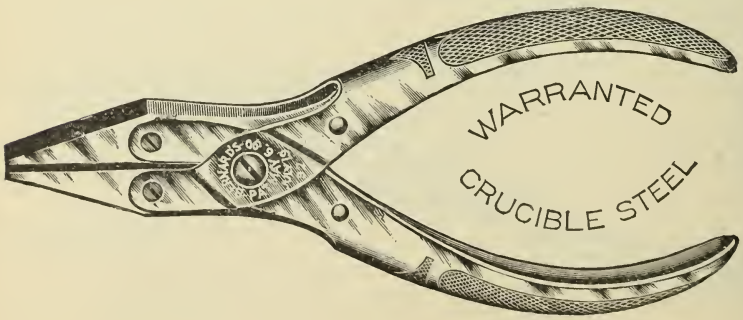


No. 13. Round.

Front Cutting Nippers, No. 10 .....each, $0 70
Flat Nose Pliers, No. 12..... " 40

Side Cutting Nippers, No. 11.....each, $0 70
Round Nose Pliers, No. 13..... " 40

Parallel Pliers.

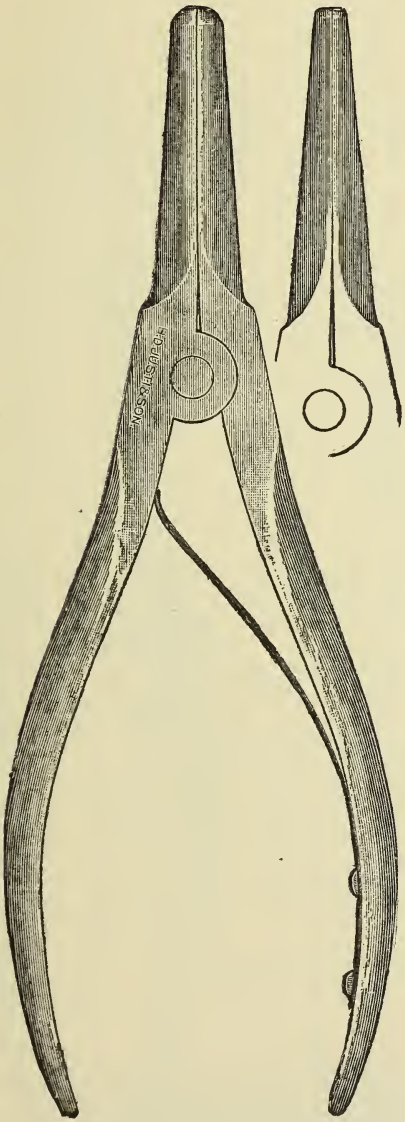


Parallel Pliers are a laboratory necessity. The jaws are exactly parallel along the entire bite, so that whatever they grasp is held immovably, whether a piece of plate as thin as cardboard or a quarter-inch thick. Nickel-plated all over.

PRICES.

4½ in.....per pair, $0 80
5 "..... " 90

Crown Expanders.

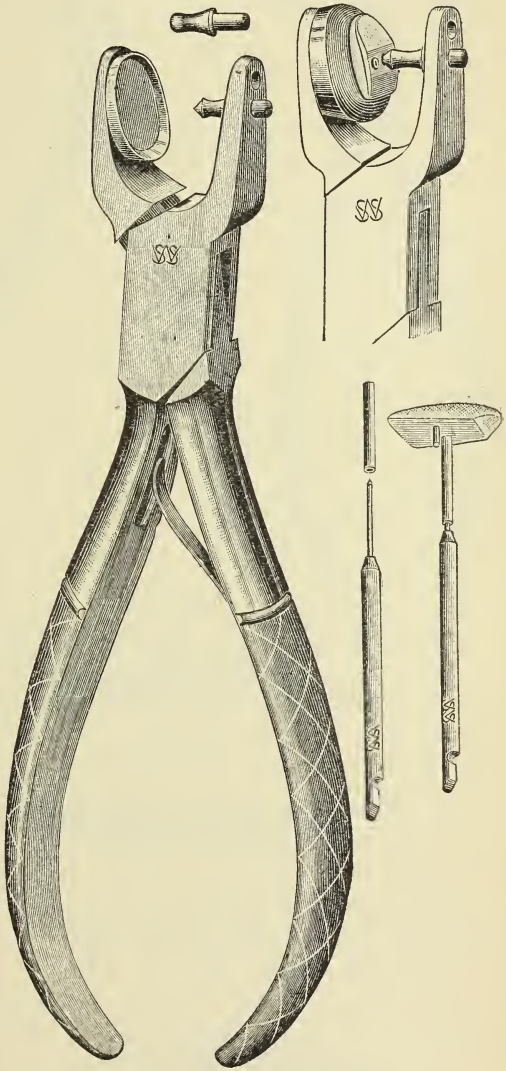


No. 17.

A handy instrument for enlarging gold crowns or collars. By proper manipulation these Expanders can be used to enlarge any portion in any particular direction, or the entire crown. Two sizes of beaks.

Price, either size, nickel-plated.....$1.00

Shriver's Bridge-Repairing Pliers and Drill.



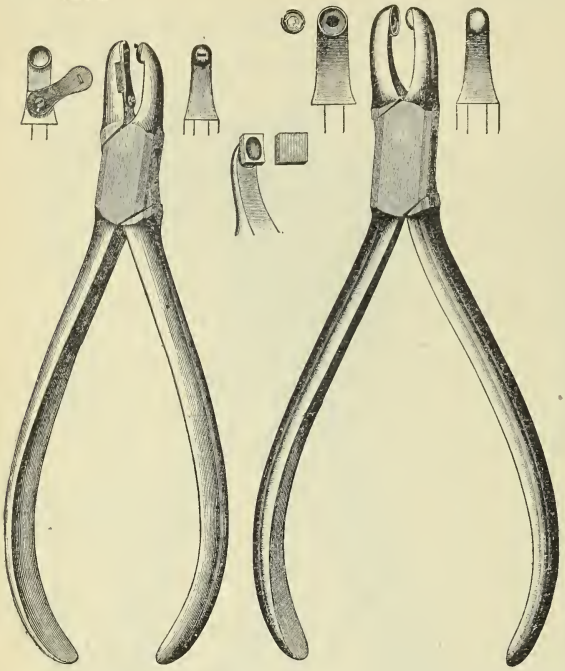
No. 18.

This method permits the immediate use of a plate tooth facing selectable from any stock and firmly fixable on the bridge or crown without any disturbance of post or pier.

The engraving shows how it is done. The pin of the facing is simply rivetted to the backing.

Price, No. 18, Bridge-Repairing Pliers .... per pair $3.00

Price, No. 18, Sleeve Drills, for No. 6 or 7 Hand-piece ..... each, .45



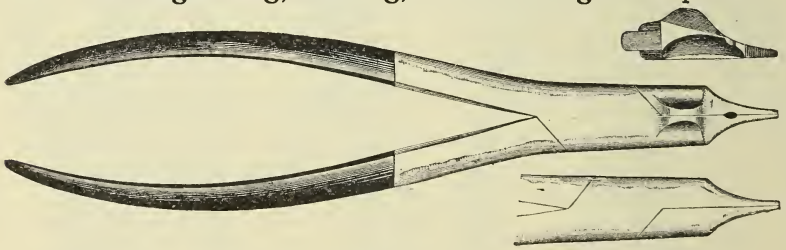
No. 19. S. S. White. No. 20. Abell's.

Contouring Pliers.

No. 19. Provided with an adjustable steel punch for making stop or guard on collar of crown.
Price ..... per pair, $2.00

No. 20. A leaden bullet (No. 5 shot) is pinched into recess forming contouring surface that will not scratch the crown.
Price ..... per pair, $2.00

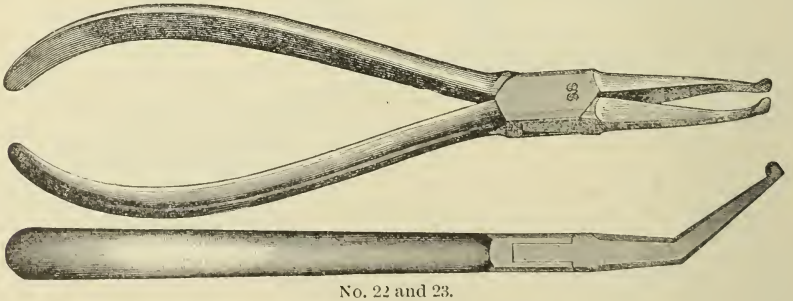
Pin-Roughening, Cutting, and Bending Forceps.



No. 21.

No. 21. This appliance may be employed as a wire-cutter, for bending clasps, or for roughening the posts of crowns so that the cement with which they are set shall take a firmer holder upon them.
Price ..... per pair, $2.50

No. 22 and 23 How's Crown Pliers.



No. 22 and 23.

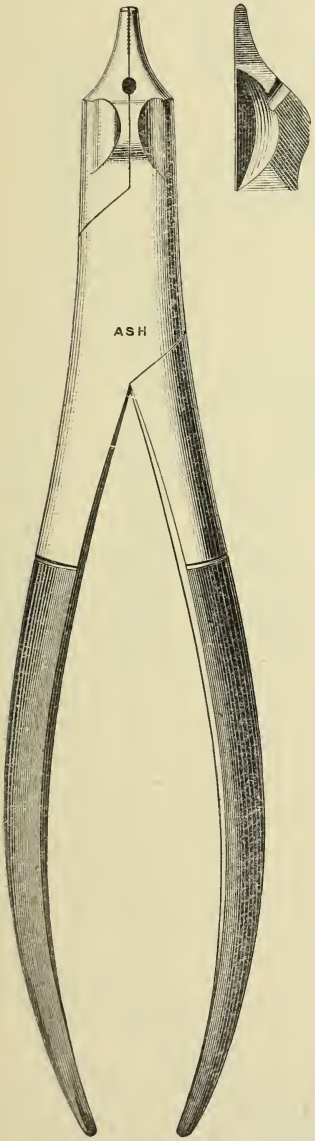
Nos. 22 and 23, straight and curved Pliers, for bending pins over posts, in Dr. How's process of mounting artificial tooth-crowns.

PRICES.

No. 22, Straight ..... per pair, $1.50
No. 23, Curved ..... " 1.75

Pin-Roughing and Bending Pliers.

C. Ash & Son.'



Full Size.

This is the most useful tool ever devised for cutting, roughening, and bending the pins of flat and vulcanite teeth.

To obtain the best results the pins should be bent as nearly as possible at right angles—see Fig. A—and in such a direction that they will grasp the vulcanite in the thickest part. In the several illustrations given above, Fig. B shows the most usual bend.

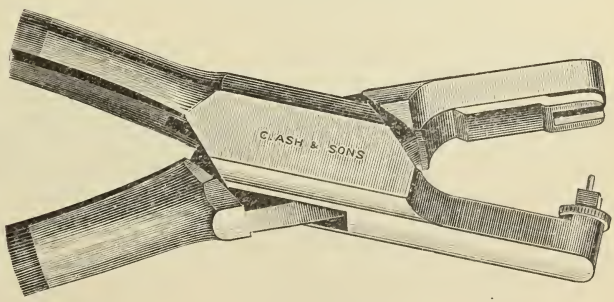
Pliers, as illustrated, Nickel-plated.....$2.25

Pin Nippers.

For Punching Holes in Metal Backings for Flat Teeth.

The Chop in which the pin is fixed is so arranged that the cutting pins can be renewed as often as necessary. This is accomplished by merely unscrewing the movable pin-holder A, and dropping in the pin from the back. The pins are flattened at one end, to prevent them turning round or falling through, and when the pin-holder A is screwed home in the head of the nippers the pin is perfectly secure.

Price, Nickel-plated, including 6 Pins.....$2.25
Extra Pins .....per doz. .25
Pin-Holder A, extra, for renewing..... .50

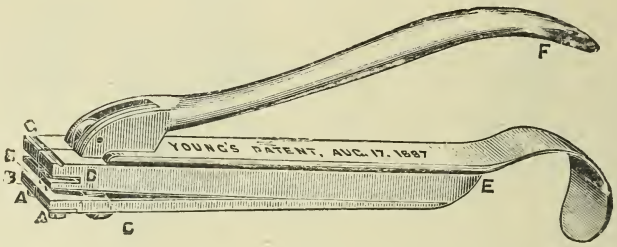


6½ in. long.

Young's Adjustable Perforators.

For Punching two holes at once.

Made by C. Ash & Sons, Ltd.



Mr. Young claims that his tool secures, rapidly and with mathematical precision, exact correspondence between the holes in the metal plate used for backing teeth, and the pins of the tooth to be backed. It provides also for the quick and easy disengagement of the plate from the perforating pins after punching. The difficulty of separating, without twisting or injuring the perforated plate (the greatest obstacle to punching two holes at once), is entirely removed.

The risk of fracture in backing teeth is reduced to a minimum.

No measuring is required. The tooth is its own gauge, virtually punching its own holes.

Method of Using.

Holding the Perforators in the right hand—like an ordinary pair of pliers—so that the end of the upper lever F rests loosely in the palm, the fingers and thumb readily grasp the lower lever E. The tooth to be backed is taken in the left hand, and one of the pins placed in the nearest punch-hole in groove G. Holding the tooth down with the thumb, the punch-holes are then slowly moved apart by pressure at E, taking special care at the time not to have the slightest pressure on the top lever F, or the jaws will not separate easily; the second pin of the tooth will slip into the second punch-hole immediately they come opposite each other, and the perforating pins are now fixed in position for punching.

Retaining the tooth in its position, the metal backing is placed in the slotted recess D, immediately under the tooth, and the holes are punched in it by pressing down the lever F.

Whilst perforating, the plate is easily held in position with the left hand, and the thumb placed over the tooth prevents its being jerked out. The tooth should be removed *before,* and the plate *after,* relieving the pressure at F.

The holes in intermediate plate C support and stiffen the pins B B, and their breakage in use is almost impossible. Should it be necessary, however, to replace the pins, it can be done with the greatest ease by taking out the screws A A and removing the back.

Price, with Set Screw $3.50

Jacob's Permanent Gutta-Percha Stopping.

From the formula of H. L. Jacob, M. R. C. S.

Jacob's Permanent Stopping is the purest, toughest, most tenacious and most wear-resisting preparation of Gutta-Percha that has ever been made. Its great durability and general excellence have been recognized by the Profession for upwards of forty years, and owing to its low specific gravity, one ounce of it is equal in bulk to several ounces of any other preparation of Gutta-Percha that is employed as a material for filling teeth.

Supplied in cylindrical Pellets, each bottle sufficing for more than one hundred average fillings, in the following shades:—

No. 1—Whitish.

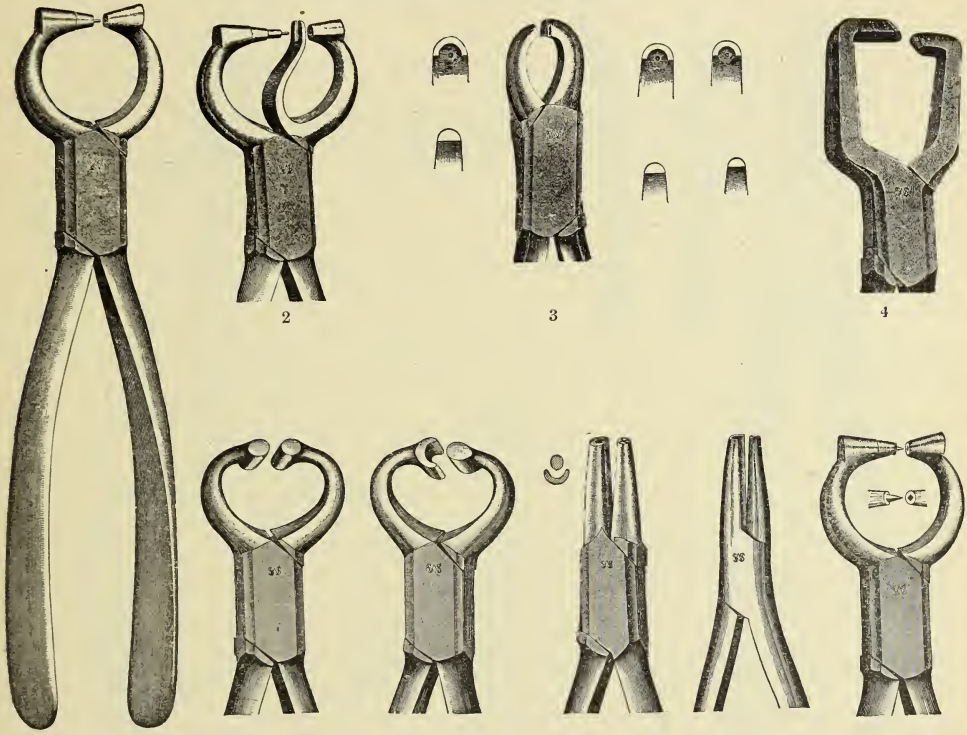
No. 2—Brownish, for teeth that are somewhat discolored.

Directions for use enclosed in each Packet.

PRICE.

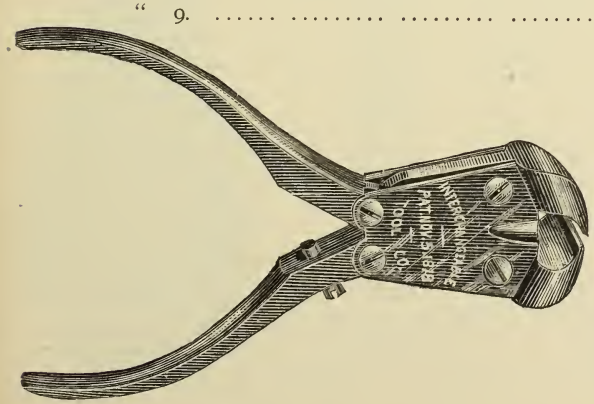
Pellets, in bottles ..... per bottle, $1.00

Mechanical Forceps.



PRICES.

		Nickel-Plated.	Plain. Cheaper Quality.
No. 1.	Regular ..... per pair,	$2.25	$2.00
" 2.	Plain handle ..... "	3.50	3.50
" 3.	Either size ..... "	2.75	2.00
" 4.	..... "	2.75	2.25
" 5.	..... "	2.75	2.00
" 6.	..... "	2.75	2.00
" 7.	..... "	2.50	2.00
" 8.	..... "	2.25	2.00
" 9.	..... "	2.75	

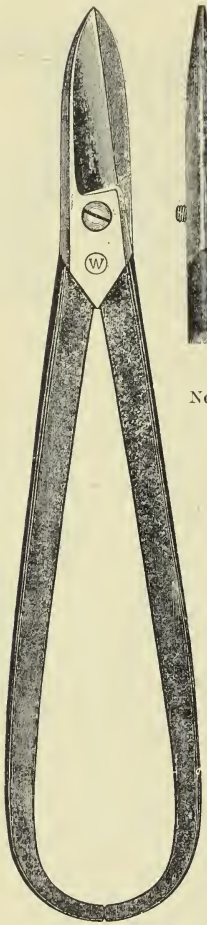


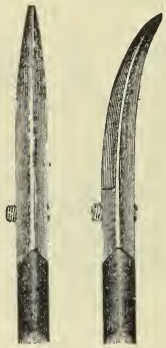
Hall's Patent Cutting Nippers.

These Nippers are constructed with compound levers, which greatly increase their power and ease of operation. They are of first-class workmanship, strong and durable, and all the parts interchangeable. Extra jaws can be supplied in the event of breakage.

No. 1, 4-in. Nippers, each.....$1.00
No. 2, 5-in. Nippers, each..... 1.20
No. 3, 7-in. Nippers, each..... 1.75

Plate Shears for Crown and Bridge-Workers.

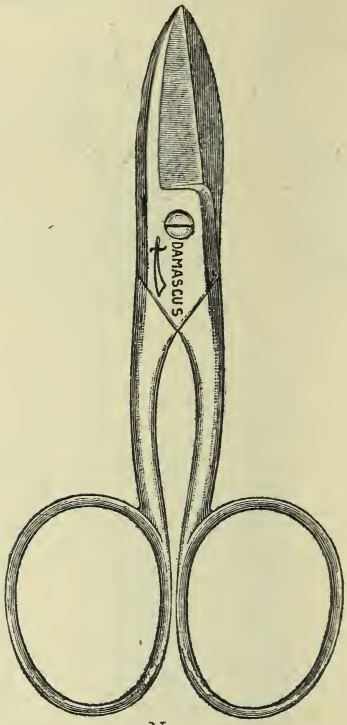




No. 1. No. 2.

Cut is ¾ size.

No. 1, Straight	each,	$0.85
No. 2, Curved	"	1.00
No. 3, Curved Scissor Handle	"	1.00
No. 4, Straight Scissor Handle	"	.85

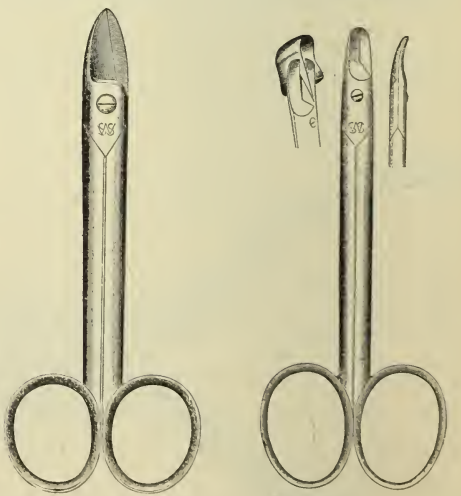


No. 5.

The cut shows the shears full size. The scissors handles and short blades adapt them to the most delicate work in trimming bands and crowns.

Price ..... per pair, $0.50

No. 6 Dr. Lane's. **No. 7 Dr. Beebee's.**

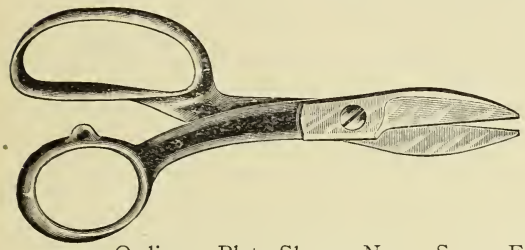


No. 6. Crown Scissors, $1.25

No. 7. Collar and Crown Scissors, $1.50.

Improved Plate Snips No. 50.

Made by Buffalo Dental Mfg. Co.



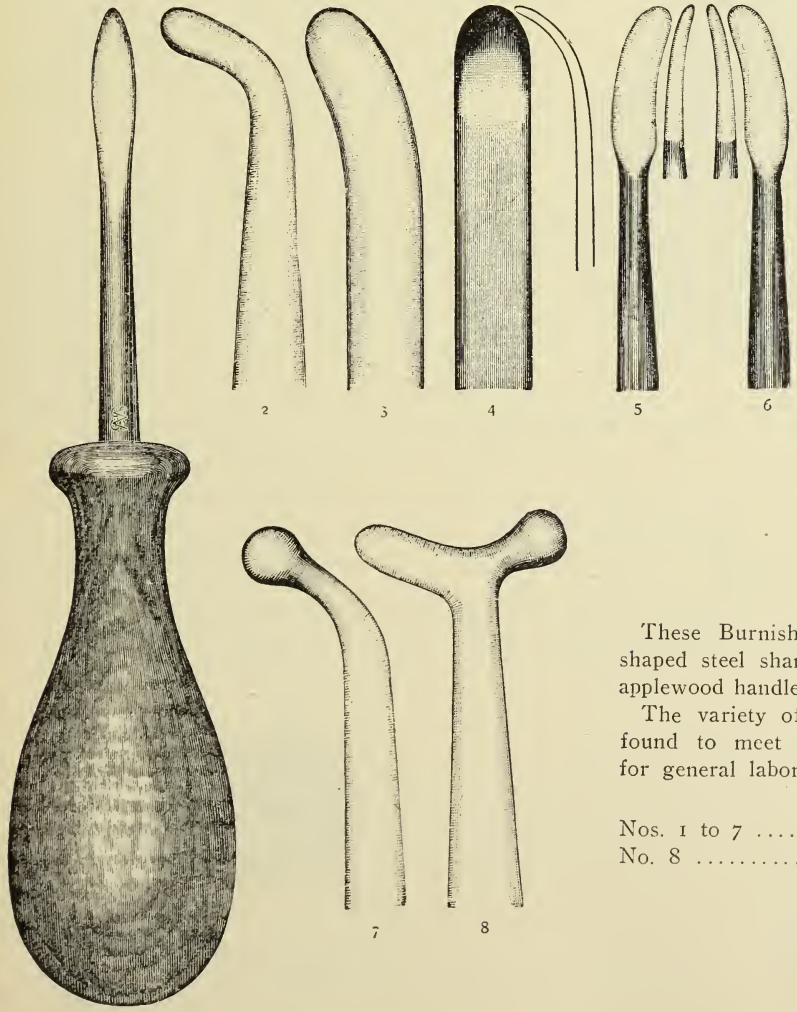
These Snips are made especially for us, from our own design, and differ from those usually sold, in the form of the blades, which are so constructed that the metal does not push forward when being cut.

PRICE.

Improved Plate Snips, No. 50....$1.00

Ordinary Plate Shears, No. 1, Screw Fastening.....per pair, $0.75
Ordinary Plate Shears, No. 2, Nut Fastening.....per pair, 1.00

Plate Burnishers.

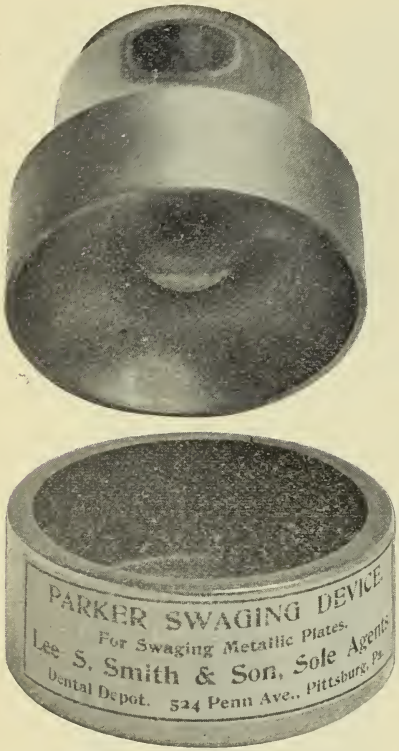


These Burnishers have finely-shaped steel shanks and polished applewood handles.

The variety of shapes will be found to meet all requirements for general laboratory use.

Nos. 1 to 7 .....each, $0.50
No. 8 ..... " .75

The Parker Swaging Device.



The Parker Swaging Device is a machine for swaging metal plates. It is a machine that does away with the counter die. It is a machine that will swage a plate on a plaster die without crushing the plaster. It is a machine that will make a metal plate fit better than any living man can make it fit by any other method. It is a success.

It works practically on the hydraulic principle. The die with the plate on it is surrounded by shot. The shape of the "follower" forces the shot down to the center. The shot flows around the die. The pressure is the same on the sides as it is on the top. It forces the plate into undercuts that an ordinary counter die couldn't touch.

The Parker Swaging Device isn't an experiment. It isn't offered as a novelty. It is a thoroughly practical apparatus that will do exactly what we say it will do. It is in daily use in some of the best offices in this country. It is simply impossible to make a metal plate fit as well without it as with it.

We have a little book of directions we will be glad to send to any Dentist who asks for it. It goes in for details. It tells just how it works and what makes it work.

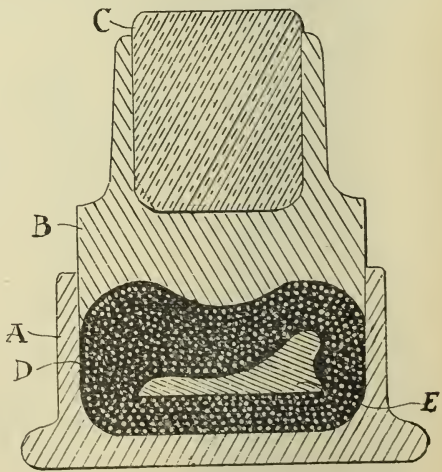
The Parker Swaging Device is sold under the same iron clad guarantee that covers every article controlled by Lee S. Smith & Son. It is sold with a guarantee to do just exactly what we say it will do. It is sold with a guarantee to give absolutely perfect results. If it doesn't do what we say it will do, and if it doesn't give absolutely perfect results, the man who is dissatisfied with it can have his money back without any arguments from us.

PRICES.

Packer Swaging Device	each,	$6.00
No. 12 Shot	per lb.,	.10

About two pounds of shot are sufficient to operate the Swager.

Lee S. Smith & Son,
Sole Agents,
Pittsburg, Pa.



A is the Cup.
B is the follower with Concave Flange.
C is the wood Concussion Block.
D is the Shot.
E shows the Die and Plate in proper position.

The Parker Crown and Band Swager.

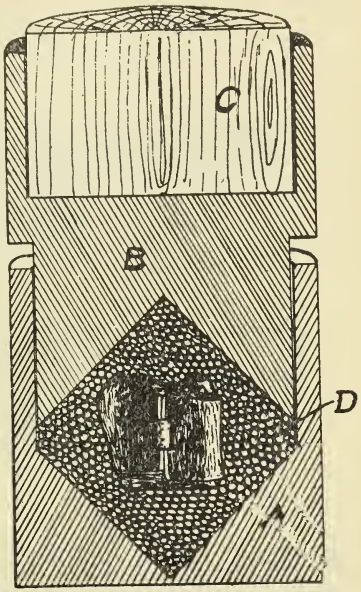
The Parker Crown and Band Swager works on exactly the same principle as the Parker Plate Swager.

If shot under pressure will force a metal plate into undercuts and around corners it will do the same thing with cups and bands and in contour work.

The only thing necessary is to have something to duplicate. Put the gold on it. Surround it with shot. Put the "follower" in place and a few smart raps with a hammer does the rest.

It isn't possible to indicate the uses to which this de vice may be put. Every man will find a different use for it. There is no limit to the uses to which it may be put.

The Parker Crown and Band Swager is sold under the same guarantee as the Plate Swager. There isn't any risk about ordering either of them. They are standard articles that no good dentist can get along without if he knows what they will do.



A is the Cup.
B is the Follower.
C is the wooden Concussion Block.
D is the Shot surrounding the plate on the die to be reproduced.

The booklet that tells about the one tells about the other. It will be sent to any Dentist who asks for it.

Price, Parker Crown and Band Swager .....each, $3.00

Lee S. Smith & Son, Sole Agents, Pittsburg, Pa.

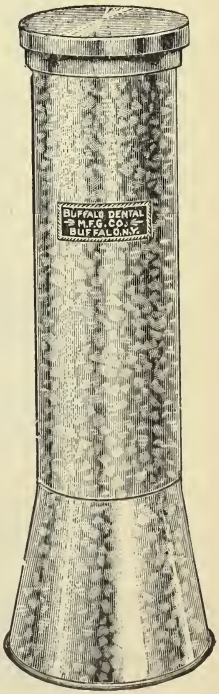
Swaging Anvil for Dental Laboratories.

Made by Buffalo Dental Mfg. Co.

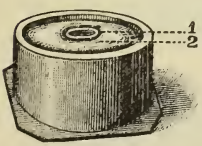
The casing is made of heavy galvanized iron and reinforced on the top by a wrought iron ring. It is filled to the top with clean lake sand to take the force of the blow, the Anvil resting on the sand and not on the casing.

The Anvil is cast iron, 6¾ inches diameter, turned and polished, and weighs 22 lbs. Total height, 28 inches; total weight, 100 lbs.

Price, No. 113 Swaging Anvil $5.50



Townsend's Fusible Metal Dies for Holding Bands.

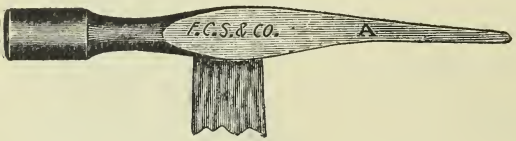


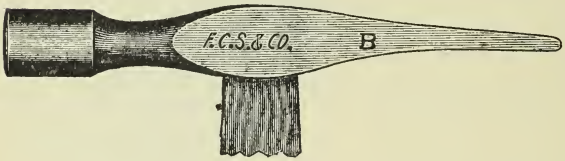
A simple and effective device for banding Logan crowns at the chair. Full directions with each die.

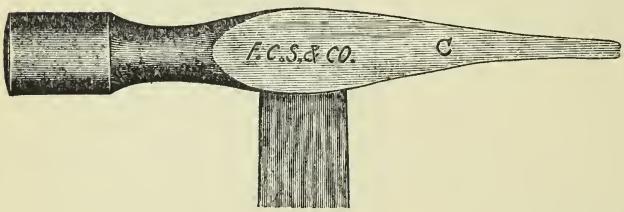
1 is opening for pin of crown.
2 is fusible metal.

Price ..... each, $0.75

Riveting Hammers.



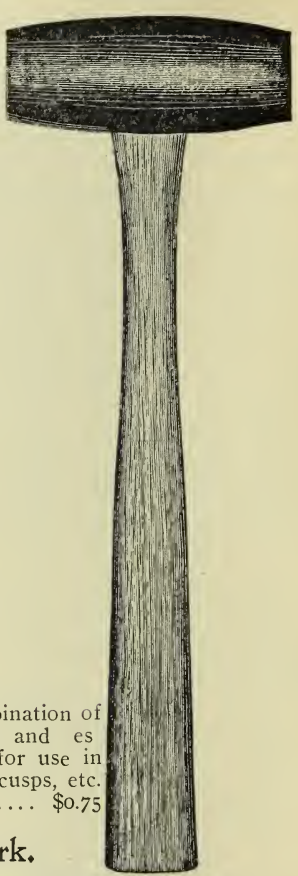




Heads of solid steel, handles of hickory.

Price, either size $0.70

Dead-Blow Swaging-Mallet.



Made of a combination of inelastic metals, and es pecially adapted for use in swaging crowns, cusps, etc.

Price $0.75

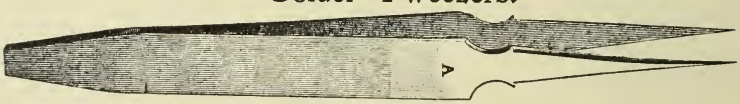
Lane's Swaging Hammer for Crown Work.

An extremely neat hammer with long (14 inch) and slender handle. It is made es pecially for Crown and Bridge Workers. Head is steel, handle of hickory.

Price $1.00

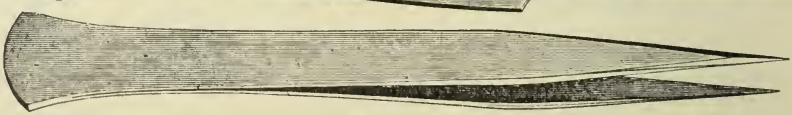
Solder Tweezers.

"A" 25 cts.



"B" 10 cts.

"E" 15 cts.

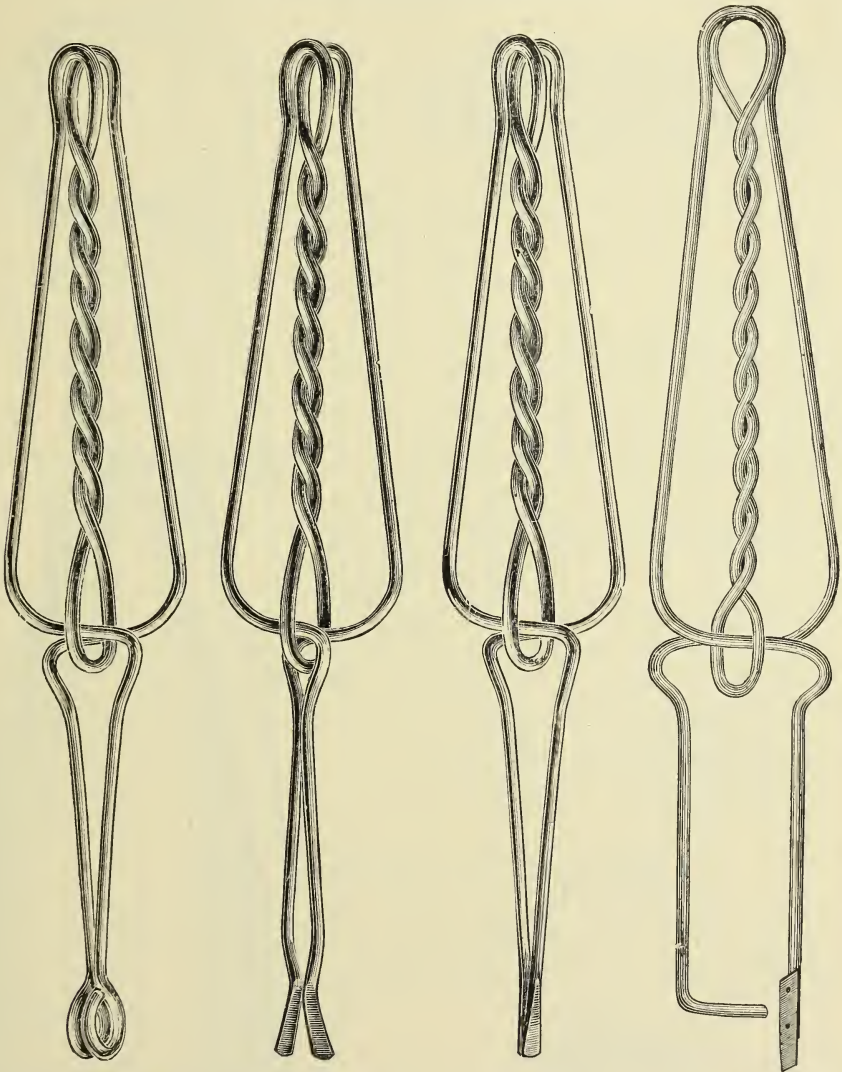


"F" 20 cts.

Soldering Tweezers.

For holding Crowns or other light work while soldering.

Made by Buffalo Dental Mfg. Co.



No. 1. Round Point. No. 2. Angular Point. No. 3. Flat Point. No. 4. Hawk Bill.

Price, Soldering Tweezers, each.....$0.15

Crucible Tongs.

Crucible Tongs.—Malleable Iron, a very neat pattern.

PRICES.

No. X, 12-inch $0.40
No. X, 17-inch ..... .50

In ordering denominate as No. X 12 or No. X 17.

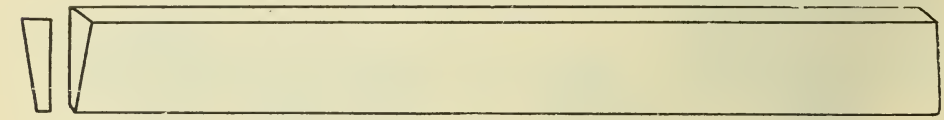
Solder Tongs.

All steel, strong and durable.

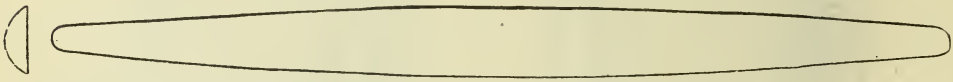
PRICES.

7 in. long.....$0.45 9 in. long.....$0.50 12 in. long.....$0.55

Carborundum Files for Crown and Bridge Work.



Flat.



Half Round. Cuts show about two-thirds size.

It isn't necessary to tell any Dentist that Carborundum will cut porcelain just as well as it will cut metal.

It is perfectly obvious that a tool that will cut both metal and porcelain is a better tool than a tool that will cut metal only.

That is the one particular reason the Carborundum Files have found favor with Crown and Bridge Workers.

These files are made stronger than they used to be. They are reinforced by a steel rod running through the center.

They are made of the genuine Carborundum Crystals. They will cut until there's nothing left of them.

PRICES.

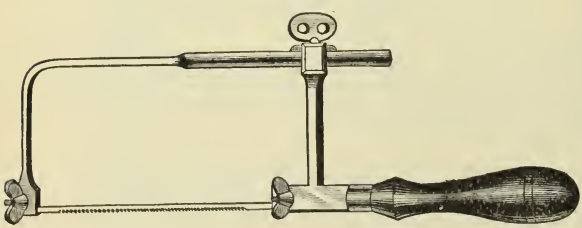
Half Round Carborundum File, any grit $0.50
Flat Carborundum File, any grit ..... .40

Plate Files.

			3 in.	3½ in.	4 in.	4½ in.	5 in.	6 in.
Half-Round,	Bastard, No. 0 Cut	per doz.	$2 90	$3 05	$3 20	$4 10	$4 35	$5 00
"	Smooth No. 2 "	each	29	30	32	41	43	50
Round,	Bastard No. 0 "	per doz.	2 05	2 25	2 50	3 25	3 35	3 70
"	Smooth No. 2 "	each	20	22	25	32	33	37
Flat,	Bastard No. 0 "	per doz.	2 80	3 00	3 15	4 15	4 35	4 80
"	Smooth No. 2 "	each	28	30	31	41	43	48

Files for Crown and Bridge Work.

Half-Round, 3 inch, Smooth, No. 6 Cut, per doz., $2.90; each, $0.29
Flat, 3 inch, Smooth, No. 6 Cut, per doz., 3.15; each, .31
Flat, 5 inch, Smooth, No. 6 Cut, per doz., 5.00; each, .50



American Saw Frames.

Rosewood handle, finely finished, American make; a better article and much stronger than the Swiss.

PRICES.

Saw Frame $0.60
Saw Frame, Nickel-plated .... .85
Swiss Saws ..... per doz., .15

Binding Wire.

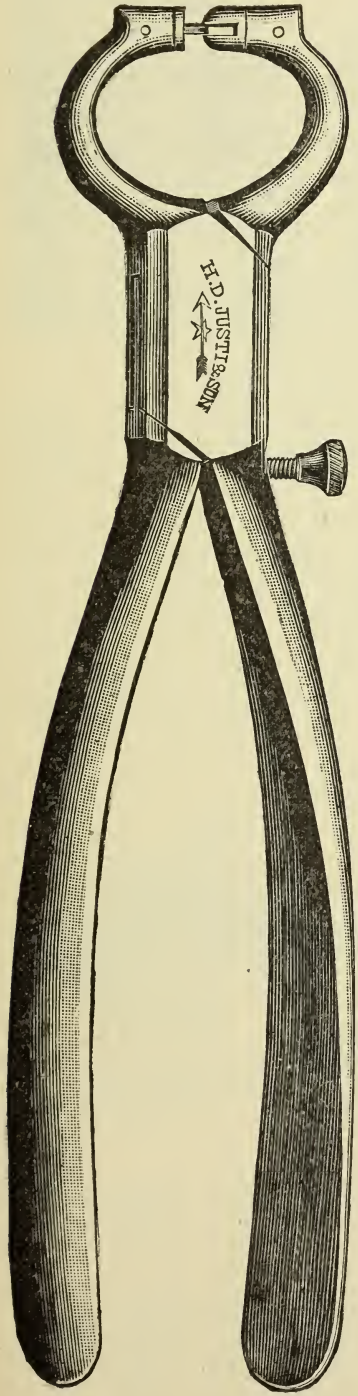
BEST QUALITY.

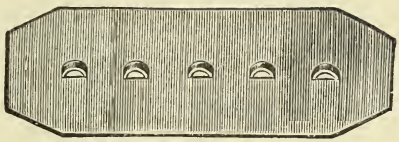
Very strong and ductile. Prepared especially for our sales.

Small Spool $0.10
Large Spool ..... .25
S. S. White's Spool, in box ..... .20

Aluminum Punch.

Made by H. D. Justi & Son.





The cut shows exactly how the loops are formed. The size of loop may be regulated by thumbscrew.

Price $2.50

Plate and Wire Guide.

This is not a gauge, but a guide to facilitate the selection of plate and wire by dentists. It shows, by actual samples, numbered according to the United States Standard Gauge, the sizes of wires—round and half-round—and thicknesses of plates commonly used in the dental laboratory, affording an ample range for almost any operation.

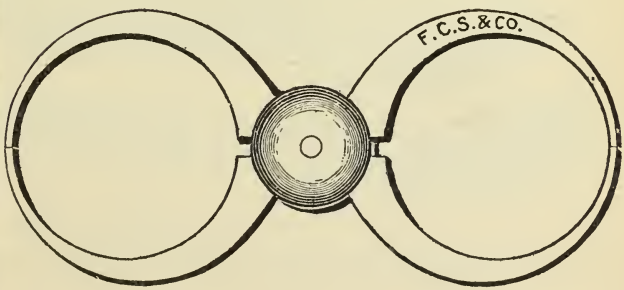
Of course there is always one of these guides in our Gold Department. If it is used in ordering there can't be any mistakes in gauge received.

Price $0.40

Brown & Sharpe's Plate and Wire Gauge.

Price ..... each, $2.00

Calipers.



Brass, Double End $0.25

Steel, Registering ..... .75

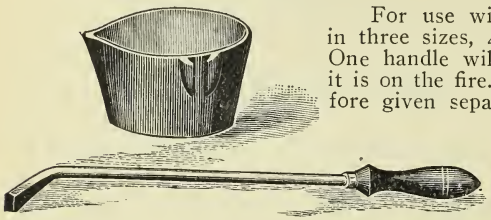
Prepared Borax Stick.

AN EXCELLENT SOLDERING FLUX.

This is a prepared flux for use in soldering gold or silver. It is used by scraping or rubbing a small quantity on a slate and mixing with water, the same as ordinary borax. This flux will not boil.

Prepared Borax Stick $0.10

Ladles with Detachable Handles.



For use with the No. 14 Ladle Furnace; of cast iron, in three sizes, 4½x2¾, 4⅜x2¾, 4x2⅜, inside measurement. One handle will fit any ladle, which can be removed while it is on the fire. The prices of ladles and handles are therefore given separately.

PRICES.

No. 14L, Ladle, 4½x2¾ inch.....	$0.40
No. 14M, Ladle, 4⅜x2¾ inch.....	.35
No. 14S, Ladle, 4x2⅜ inch.....	.25
No. 14H, Handles ..... each,	.25

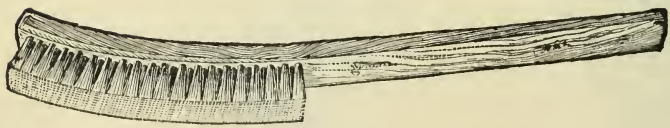
Base Metals.

Prices quoted are present prices. They are subject to change without notice.

Aluminum Ingots ..... each,	$0.20
Aluminum Plate, per oz., Troy	.20
We carry in stock sheets B. & S. gauge 18 to 26, polished and soft, 3 inches wide.	
Babbitt-metal (Haskell's formula), in ½-lb. ingots .....per lb.,	.45
Counter-Die Metal, ½-lb. ingots ..... "	.18
Crown-Hub Metal, ½-lb. ingots ..... "	.20
Fusible, Wood's, or Rubber Solder .....per ingot,	1.00
Lead .....per lb.,	.10
Pattern Metal ..... "	.25
Stuck's Metal, (pure Sheet Tin) ..... "	.60
Soft Solder, 1-oz. strips ..... per strip,	.08
Tin .....per lb.,	.45
Weston's Metallic Base, 2-oz. ingots .....each,	1.00
Weston's Solder, ½-oz. ingots, hard and soft .....per oz.,	1.00
Zinc .....per lb.,	.12

Plate Brushes.

No. 208 A.



N . 214 A.

For Cleaning Dental Plates. Flasks, Etc.

PRICES.

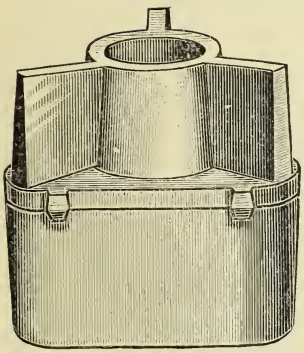
No. 208A. Four Rowed, Straight Handle	$0.40
No. 214A. Four Rowed, Curved Back	.40

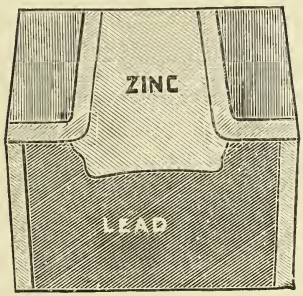
Molding Sand.

Molding Sand.....per bbl., $3.00; per bushel, $1.60; per quart,	$0.06
Molding Sand, Chase's, in 2-qt. tin cans .....per can,	1.00
Molding Sand, Chase's, in 2-qt. tin cans, with rings ..... "	1.40
Molding Sand, Brown's ..... "	.75
Investment Sand, Brown's ..... "	.50
Investment Compound, Chase's, 2-qt. tins ..... "	.50

The Lewis Moulding Flask.

Made by Buffalo Dental Mfg. Co.





For producing a new form of metal die. By the use of this flask, the metal in the die is concentrated above it, so that it has no outside bearing upon the counter-die. With it a thin model can be used, and all the advantages of the old-fashioned, thick, or built-up model, secured. Made in two sizes, "large" and "small," the lower rings being respectively 2⅝x3¼ inches, and 3x3¾ inches.

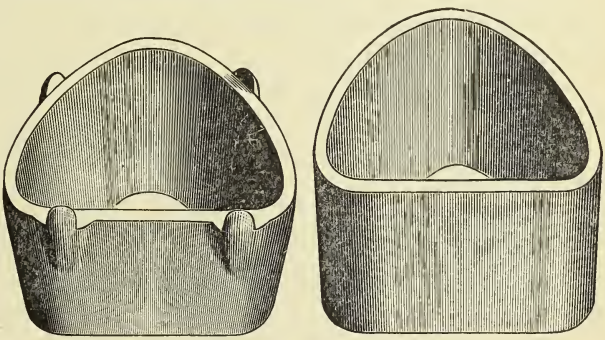
Lewis Moulding Flasks, large or small ..... each, $0.60

The Bailey Moulding Flask.

For making metallic dies and counters for swaging gold plates. Prepare a thin plaster cast, trim, varnish and dry it. Place on a board, with large ring around it. Ram the ring full of moulding sand, and draw the pattern. Put on the small ring, fill with melted zinc. Shake sand out of large ring, and fill with lead. Made in two sizes, 2⅝x3¼ inches and 3x3¾ inches.

PRICES.

Bailey Moulding Flasks, large ..... each, $0.40
Bailey Moulding Flasks, small ..... each, .35



Hawe's Moulding Flasks.

FIG. 1. FIG. 2. FIG. 3.

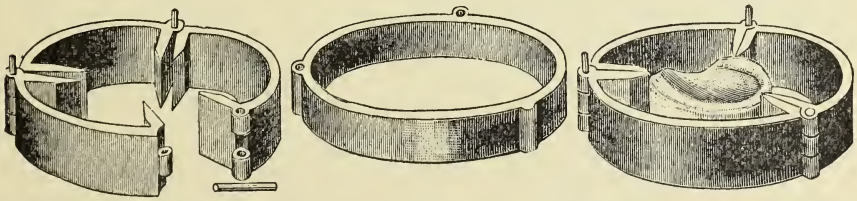


Fig. 1 represents the lower section of the Flask, slightly opened, to show the joints. Fig. 2 is the upper section. When ready for use the lower section is closed and confined by a pin, and the plaster model placed in it, as represented in Fig. 3.

Price $3.00

Casting Rings.

Four sizes, the largest, 3½ inches wide, 2⅜ inches deep; the smallest, 2½ inches wide, 2¼ inches deep.

Price, per set of four $0.60

Horn Mallets.

We don't buy every Horn Mallet that is offered to us. We could save a good deal of money if we did, but the quality wouldn't be there. Our mallets are all "best." They are made of good solid horn, highly polished and are strongly mounted on wood handles.

Price ..... each, 30 to 40c.

Sump.

A Time-Saving Investment Compound for Crown and Bridge-Work.

Sump mixes quickly. It dries out before the soldering can be begun. It requires less water for mixing than any other investment material. It holds together firmly. It makes a good model and cannot crack. It holds the teeth securely and properly protects them, and it is readily removed from the model after the soldering is completed.

Sold in one-quart cans (2½ lbs.) and in bulk.

Price.....per can $0.75
Price.....(bulk, 10 lbs. or over) per lb. .25

The Samsioe System of Plateless Dentures.

The system, practically as now offered, has been in use for several years, and crowns and bridges made under it have proven durable, and have given satisfaction to their wearers.

The methods of use are simple. Any competent dentist can follow them readily.

PRICES.

Rex Alloy .....per pkg. $1.00
Rex Soldering Acid.....per bottle .25
Regina Compound .....per box 1.00
Complete outfit (Alloy, Acid, and Compound)..... 2.25

Dr. Parr's Flux.

For Gold, Silver, Crown and Bridge Work.

This Flux is vitrified and pulverized ready for use. It is carefully prepared and free from slag, sand, and other impurities.

Put up in boxes, directions on each.

Price .....per box $1.00

Dr. Parr's Hard Wax Flux.

For attaching Clasps and Teeth in Plate and Bridge Work.

The wax, throughout which the flux is distributed, is readily burned or melted out, leaving the flux as a deposit over the crevices and surfaces to be joined.

Put up—¼ lb.—in enameled metal boxes.

Price .....per box $0.50

Wax Cement.

This mixture sets quickly and holds the teeth and clasp firmly for trial in the mouth and during subsequent investment for soldering.

Price .....per box $0.25

THE MITCHELL INVESTMENT COMPOUND.

Formula of GRANT MITCHELL, D.D.S.

The Mitchell Investment Compound is a time saver for every crown and bridge worker.

It is an absolute necessity to any man to whom time is an object.

It mixes easily; sets almost instantly and as soon as it is dry enough to pick up may be subjected to the flame of a blow pipe for drying out.

It does not shrink.

It does not expand.

It does not crack.

It does not check.

It can be built onto without risk of separation in the firing.

It holds the teeth securely; protects them properly and although when set it is harder than any similar preparation it is easily removed from the model when the soldering is completed.

The Mitchell Investment Compound is superior to anything of its class.

We have put it on the market because it is the only thing in its class that meets all the requirements of a specialist in crown and bridge work who has tried every similar thing on the market.

This is what he says about it:

PITTSBURG, January 1, 1901.

LEE S. SMITH & SON,
CITY.

GENTLEMEN:

Although the Investment Compound which you put up bearing my name is a discovery of my own, I assure you I am not prejudiced in its favor on that account, as of all the investment materials on the market it is absolutely the only one that meets my requirements in every particular.

I also wish to express my appreciation of your policy in selling the Compound at the very reasonable price you have placed upon it, and remain,

Yours very truly,
GRANT MITCHELL, D.D.S.

The Mitchell Investment Compound is a success.

It comprises all the good features of every other similar thing.

It sells for less money than any other similar thing.

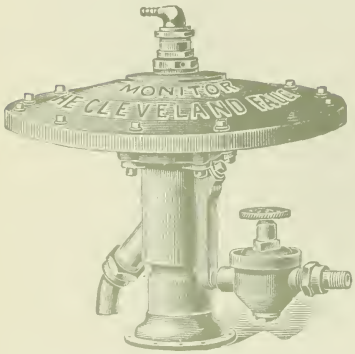
PRICES:

Per can, about double size usually sold, 50 cents.

Made by

LEE S. SMITH & SON,
Dental Depot,
PITTSBURG, PA.

HYDRAULIC AUTOMATIC AIR COMPRESSORS, RECEIVERS, ETC.



COMPRESSOR.
Stands 14 in. high. Diameter, 13 in.

This is an air compressor or pump operated by water. It is made to connect to the supply and waste pipes in the laboratory.

The action of the pump is entirely automatic. It pumps air into the receiver just a little bit faster than any dentist can exhaust it. It can be regulated to maintain any pressure desired.

THE COMPRESSOR

The compressor or pump that is part of this outfit has quicker action than any compressor ever made. The maximum pressure of air is equal to the water power operating it.

THE RECEIVER

The tank, or receiver, has a capacity of eight gallons. It is equipped with a 30-pound pressure gauge, a device for regulating the flow of air and a blow-off cock.

RECEIVER.
Capacity, 8 gallons.
Stands 30 inches high.
Diameter, 9 inches.

In use the compressor is connected with the receiver and the receiver with the blow pipe or with any appliance where air in unlimited quantity at any desired pressure is required.

With this outfit it is possible to do better work and more work with less exertion than is possible with the ordinary foot bellows.

It is possible to do better work because the hand is steadier.

It is possible to do more work because the blow pipe or case heater, or both together, may be operated for an unlimited time absolutely without exertion.

An automatic air compressor and receiver is indispensable in the modern dental laboratory.

It is not a luxury.

To any man who has ever used it, it is a necessity.

PATENT AIR PRESSURE REGULATOR.
Height, 4 inches.
Give perfect control over flow of air to blow pipe. Screw in for higher pressure and out for lower pressure.

Aside from its use in the laboratory, air may also be conducted to the chair and used to operate chip blower, etc., if desired.

PRICES:

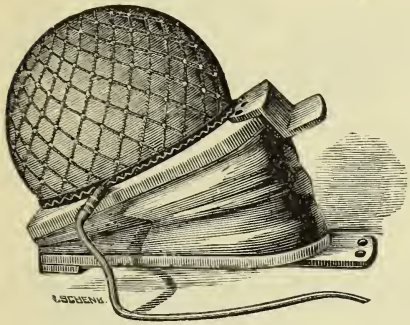
Automatic air compressor and receiver, complete with gauge, regulators, etc., as shown, ... $42 25
Discount for cash, 5 per cent.

This outfit is warranted in every particular. It is sold under a money back guarantee.

Sole Agents,
LEE S. SMITH & SON, DENTAL DEPOT,
PITTSBURG, PA.

Fletcher Foot Blowers.

Made by Buffalo Dental Mfg. Co.



Style No. 9, 9A, or 9B.

These Blowers are without doubt the very best ever constructed for laboratory and workshop purposes. They are of excellent workmanship, and constructed of the best materials obtainable. We guarantee them to be as durable as any article of the kind ever made. They are made in two styles, viz.: No. 9 and No. 10. There are also three sizes of each style. A rubber disk forms the air reservoir and equalizes the pressure by its elasticity. By increasing the number of disks, a greater air-pressure is obtained.

It can be operated anywhere, even upon a dust heap, and a blast of pure air obtained.

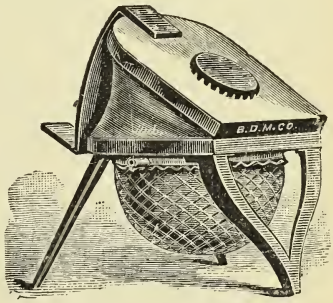
No. 10 is mounted upon legs, the blower being reversed, so as to bring the air reservoir below instead of above. This obviates the risk of injury to the rubber disk or its containing net, by dropping tools or corrosive liquids upon them.

Nos. 9 or 10 are adapted for ordinary blow-pipe work.

Nos. 9a or 10a for larger blow-pipes or small melting furnaces.

Nos. 9b or 10b for largest blow-pipes and melting furnaces.

The name Buffalo Dental Mfg. Co., Buffalo, N. Y., is stamped in the wood on each bellows made by the Buffalo Dental Manufacturing Co.



Style No. 10, 10A, or 10B.

These are the Bellows we handle exclusively. There are no other good ones made. These are the original. The best. There are imitations.

PRICES OF FOOT BLOWERS.

No. 9.	Foot Blower	.....	$4.00	Extra Rubber Disks	.....	each,	$0.50
" 9A.	"	.....	5.00	" " "	.....	"	.75
" 9B.	"	.....	7.00	" " "	.....	"	1.00
" 10.	"	.....	5.00	" " "	.....	"	.50
" 10A.	"	.....	6.00	" " "	.....	"	.75
" 10B.	"	.....	8.00	" " "	.....	"	1.00
Extra Nets		.....			.....	"	.35

The following table will give an idea of the sizes of Foot Blowers, their capacity and blast pressure:

TABLE OF SIZES AND CAPACITY OF FOOT BLOWERS.

		Size of boards.	Diameter of air reservoir.	Pressure of blast per inch.	Cubic ft. of air per hour.
No. 9 or 10.	Foot Blower	7¾x 9	7¼ in.	1 lb.	190
No. 9A or 10A.	"	10 x11	9 in.	1½ lbs.	330
No. 9B or 10 B.	"	11½x13¾	11 in.	1¾ lbs.	625

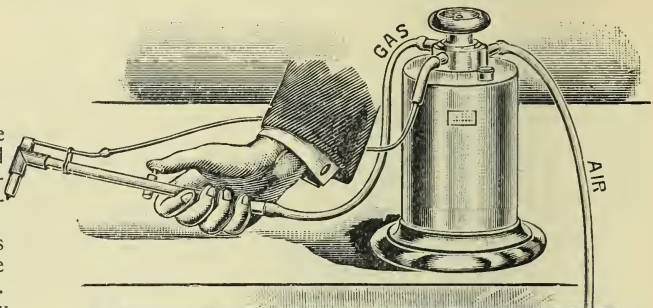
English Pattern Double-Action Foot Bellows.

Price ..... each, $5.00

Gasoline Gas Generator. No. 45.

As used with No. 6G Blowpipe.

Made by Buffalo Dental Mfg. Co.



This Generator is made wholly of brass, polished and nickel plated. It is very ornamental and of first-class workmanship throughout.

There isn't space in this Catalogue to describe all the good feature of this apparatus. It is a work of art. It is worthy a place in any laboratory.

In power, simplicity and convenience this Generator has not been approached by any similar apparatus. The vapor produced equals gas in every respect, and the Generator can be used in locations where gas is not available. The flame and heat is of absolute purity, and is preferred by many who have gas, owing to the absence of sulphur and other impurities.

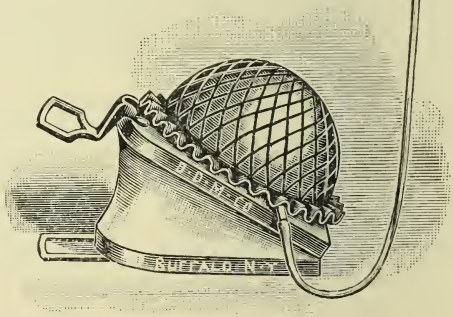
The Buffalo Dental Mfg. Co.'s booklet telling how it works and what makes it work will be mailed on request.

PATENTED { Sept. 19, 1899, Sept. 26, 1899.

No. 45. B. D. M. Co.'s Gasoline Gas Generator, only..$ 7.50

No. 45. B. D. M. Co.'s Gasoline Gas Generator, with Rubber Connecting Tubing and Brass Reducer, without Foot Blower and Blowpipe 9.20

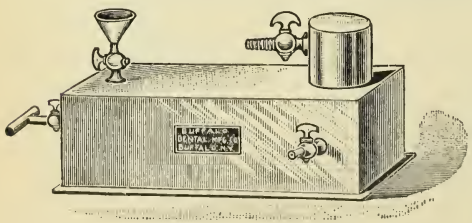
No. 45. B. D. M. Co.'s Gasoline Gas Generator, with No. 6G Blowpipe, Rubber Connecting Tubing and Reducer, without Blower..... 11.00



No. 6G and No, 45.

No. 45. B. D. M. Co.'s Gasoline Gas Generator, with No. 6G Blowpipe, Rubber Connecting Tubing, Reducer and No. 9 Foot Blower, complete, ready for use.. 15.00

Gasoline Gas Generators. Nos. 40C and 44.



No. 40c and No. 44.

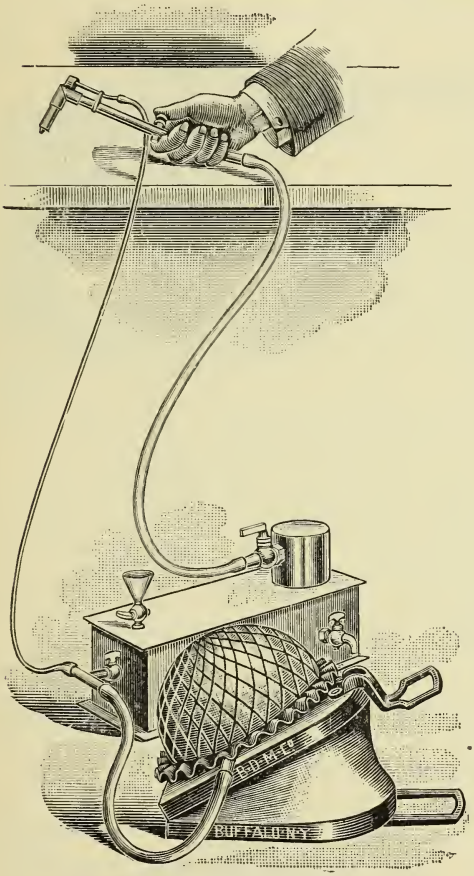
Practically this form of Generator is just as effective as the No. 45. It is not of so late design and is not quite so convenient to use, but it will make just as good gas.

No. 40C. Gasoline Gas Generator, alone, size 4x4x10 inches; capacity, about 1 qt. of Gasoline .....$ 6.00

No. 44. Gasoline Gas Generator, alone, size 10x10x18 inches; capacity, about 1½ gallons of gasoline..... 15.00

Rubberconnecting tubing not including in prices.

Gasoline Gas Generator. No. 40C.



No. 6G and No. 40C.

The No. 6G blowpipe is used exclusively with the No. 45 and No. 40C Gasoline Gas Generators and is intended for light soldering and melting only.

As used with No. 6G Blowpipe.

Made by the Buffalo Dental Mfg. Co.

The No. 6G Blowpipe is made expressly for use with gasoline gas as generated by No. 40C and No. 45 Gasoline Gas Generators.

The Generator is useless except with a supply of air under pressure, and will, therefore, have to be operated in connection with a foot-blower, as shown in the illustration.

PRICES.

No. 6G. Blowpipe	$2.50
No. 9 Foot-Blower	4.00
No. 40C. Generator, only	6.00
No. 6G Blowpipe, No. 9 Foot-Blower, No. 40C Generator, Rubber Connecting Tubing and one reducer, complete, ready for use	13.50

No. 6G Blowpipe.

For Gasoline Gas. Non-Extinguishable.

This blowpipe, exclusively used for gasoline gas, has been improved by the substitution for the ordinary air and gas outlet tubes, of a concentrating chamber surrounding the air-jet, and a deflecting sleeve covering both gas and air outlets. This arrangement prevents the extinguishing of the flame at a critical moment, by overpressure or any other cause. A new method of regulating the size of the flame has been adopted, which requires but a simple partial rotation of the controlling valve to produce a fine pointed flame up to one, three or four inches long. The large brush flame is obtained by depressing the valve stem.

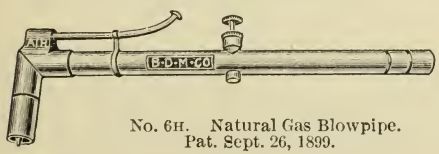
No. 6G. Gasoline Gas Blowpipe. Pat. Sept. 26, 1899.

Price, No. 6G. Gasoline Gas Blowpipe $2.50

No. 6H. Blowpipe.

For Natural Gas. Non-Extinguishable.

This Blowpipe exclusively used for natural gas, has been improved by the substitution for the ordinary air and gas outlet tubes, of a concentrating chamber surrounding the air-jet, and a deflecting sleeve covering both gas and air outlets. This arrangement prevents the extinguishing of the flame at a critical moment, by over-pressure or any other cause. The size of the flame is regulated by a simple partial rotation of the controlling valve which produces a fine pointed flame, up to one, three or four inches long. The large brush flame is obtained by depressing the valve stem.



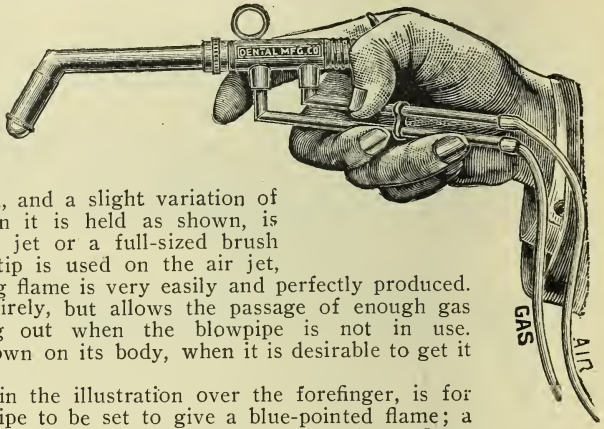
No. 6H. Natural Gas Blowpipe. Pat. Sept. 26, 1899.

PRICE.

No. 6H. Blowpipe for Natural Gas $2.50

Automaton Blowpipe. No. 6F.

For Crown, Bridge-Work and General Soldering Purposes.



This is an improved pattern of the Fletcher Automaton, designed especially for use in the dental laboratory. The supply of gas and air is controlled by a longitudinal movement of the tube, instead of a rotative one. A spring opposes the movement of the hand, and a slight variation of pressure upon the end-piece, when it is held as shown, is sufficient to give either a pointed jet or a full-sized brush flame at pleasure. An improved tip is used on the air jet, and the small blue-pointed reducing flame is very easily and perfectly produced. The gas passage does not close entirely, but allows the passage of enough gas to prevent the flame from going out when the blowpipe is not in use. It can be hung up by the ring shown on its body, when it is desirable to get it out of the hand.

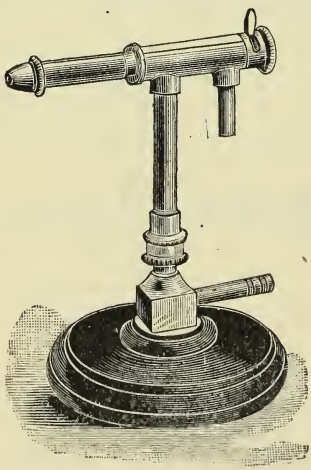
The "regulating nut," shown in the illustration over the forefinger, is for the purpose of allowing the blowpipe to be set to give a blue-pointed flame; a brush flame can then be used, and instantaneously changed to a pointed flame at pleasure, and without special effort of the hand to keep the proper adjustment. A reducer is furnished, by which the small rubber tubing used with the blowpipe can be connected with the larger tubing which fits the blower nozzle.

With the Fletcher No. 9 or No. 10 Foot-Blower, this blowpipe is believed to form the most convenient apparatus for soldering dental plates which has yet been produced.

PRICES.

No. 6F. Automaton Blowpipe including one reducer..... $3.00
Rubber Tubing, for connection .....per foot, .12

No. 6A. Automaton Blowpipe.



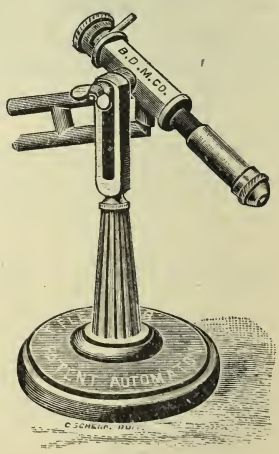
No. 6A. Automaton Blowpipe.

The No. 6A is mounted on a stand, with a universal ball joint, so as to enable it to be used at any angle, or in any position. It is simple, self-adjusting for *both gas and air*, requiring only a slight motion of a small lever to obtain instantly any flame, from the smallest to the largest.

PRICE.

No. 6A. Automaton Blowpipe, on stand, $4.00

No. 6D. Automaton Hand Blowpipe on Standard.

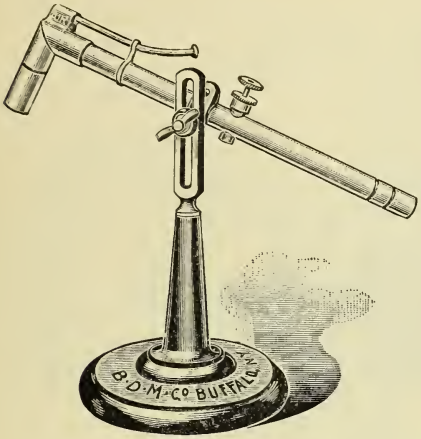


No. 6D.

The engraving shows the No. 6B Hand Automaton Blowpipe mounted on stand. When so mounted it is designated No. 6D. The blowpipe is easily detached and capable of use in the hand.

PRICE.

No. 6D. Automaton 6B on Standard..$4.00



No. 6G. Blowpipe Stand.

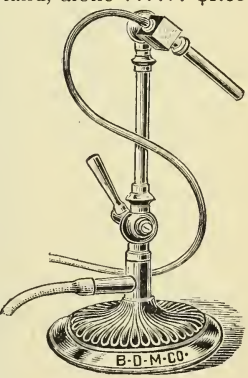
Made by Buffalo Dental Mfg. Co.

For the convenience of those desiring a support for the No. 6G Blowpipe, the stand illustrated above will be found very useful. The Blowpipe can be raised or lowered a distance of two inches, and by means of a clamp secured by a thumb-nut it can be placed at any desired angle.

The support is seven inches high, and is mounted on a japanned cast iron base of sufficient weight to prevent its being dragged off the bench.

Price, No. 6G Blowpipe Stand, alone $1.00

No. 4A. Improved Herapath Blowpipe.



Double-jointed, and can be adjusted to deliver its flame in any desired direction. The flame is readily controlled. No. 4 is made in the same manner as No. 4A, but with a lower joint, making it easier of adjustment and of wider range.

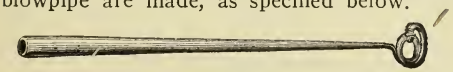
Either of these Blowpipes can be used in connection with the No. 9 Foot Blower, or with a blast from the mouth. In the later case, a mouthpice is required.

PRICES.

No. 4A. Improved Herapath Blowpipe..... $3.00
No. 4. Improved Herapath Blowpipe 3.75
Metal Mouthpiece, with shield to sustain the lips..... .60

No. 30. Fletcher's Hot Blast Mouth Blowpipe.

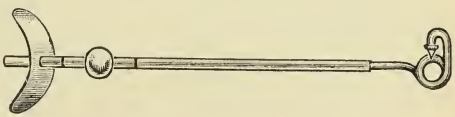
This has nearly double the power of the old mouth blowpipe. Five patterns of this blowpipe are made, as specified below.



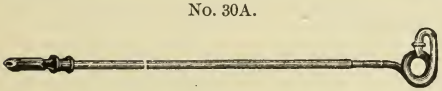
No. 30.

No. 30C.

No. 30A.



No. 30F.

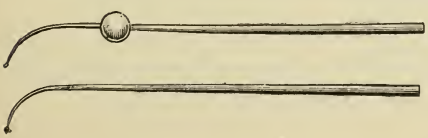


No. 30B.

PRICES.

No. 30. Taper Shaft, brass $0.65
No. 30A. Straight Shaft, brass ..... .55
No. 30B. Straight Shaft, brass, with hard rubber mouthpiece.. .75
No. 30C. Jointed with both hot and cold blast jets 1.00
No. 30F. With Moisture Bulb and Metal Mouthpiece, nickel plated 1.60
Hard Rubber Mouthpiece, separately.. .20

Mouth Blowpipes.



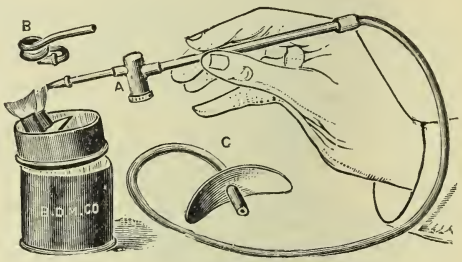
Brass, with Bulb.		Ordinary—Plain Brass.	
9-inch	$0.24	9-inch	$0.12
10-inch	.26	10-inch	.13
11-inch	.28	11-inch	.14
12-inch	.30	12-inch	.15
23-inch	.32	13-inch	.16

Fletcher's Blowpipes Nos. 42 and 42A.

Made by Buffalo Dental Mfg. Co.

Designed from practical experience as to the requirements of users. The mouthpiece is, of all, the easiest to use, and the heaviest continued blowing causes no strain on the lips, whilst the tongue has the necessary control over the opening. The chamber on the stem stops all condensed moisture, and prevents the heat traveling up the shaft.

Two hubs on the moisture chamber, placed at right angles to each other, by which means the Blowpipe can be used in the original parallel form, or the jet can be changed so as to be at right angles to the stem if desired.



PRICES.

No. 42. Fletcher's Blowpipe, with cold blast and hot blast, two jets, nickel plated mouthpiece 1.50

No. 42A. Fletcher's Blowpipe, with Lander's improvement, with cold blast and hot blast, two jets, nickel plated mouthpiece..... 1.75

Mouthpiece, alone, for use with other blowpipes ..... .60

Miscellaneous Blowpipes.

Made by The S. S. White Dental Mfg. Co.

Matchless Blowpipe.

The "Matchless" Blowpipe can be used with power, or when this is not at hand, as a mouth blowpipe, for which purpose three feet of air-pipe are supplied without extra charge.

Price $2.50

The Macomber Gas Blowpipe.

This Blowpipe can be attached to an ordinary gas bracket in place of the burner. The tube is double, the air being driven through the inside tube, adding force and giving a cylindrical form to the flame.

Price $2.50

Burgesse's Mechanical Blowpipe.

A simple and efficient device for maintaining a continuous supply of air in soldering, etc., giving a steadier and stronger blast than can be obtained by the use of the ordinary mouth blowpipe. A pressure of from two to twelve pounds is produced at the will of the operator. The machine weighs twelve pounds, and measures twenty-two inches in height.

Price, complete $10.00

The S. S. White Self-Acting Blowpipe.

Lighting a small flame vaporizes alcohol in the boiler rapidly, the pressure forcing the vapor through the pipe into the large flame at the side of the lamp, forming a very practical and efficient blowpipe.

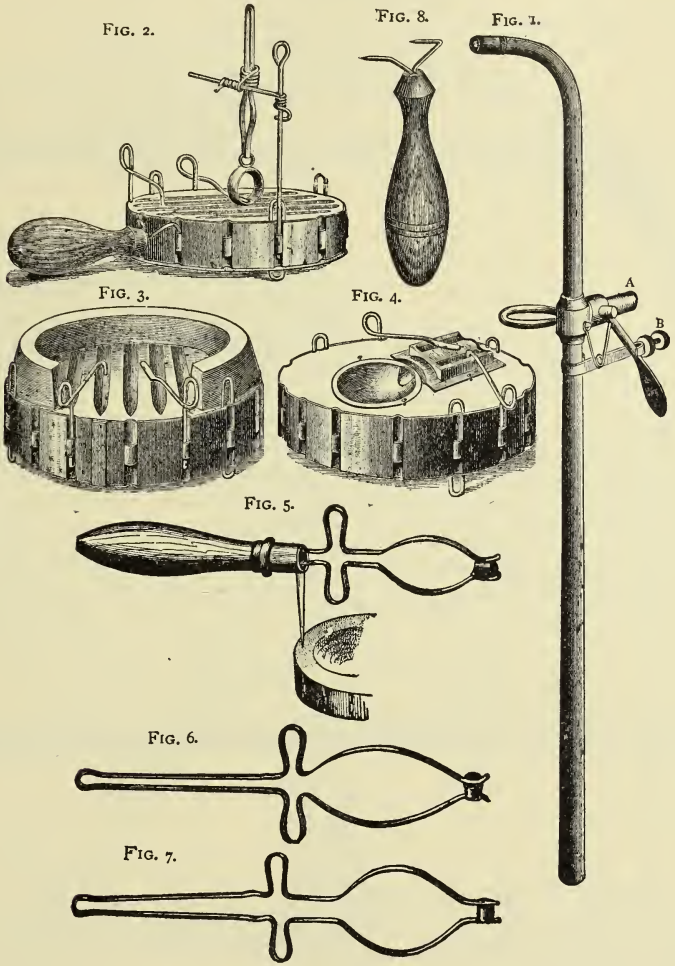
Price $5.50

Lee's Brazing Blowpipe.

The flame is controlled by a spring lever so accurately that a wire flame can be directed upon a particular spot. Releasing the lever shuts off the gas supply, allowing only enough to escape to keep the flame lighted for future use.

Price $3.00

Melotte's Soldering Appliances.



Dr. Melotte's set of soldering appliances now consists of the devices shown above, and described below The usefulness and completeness of the set will be at once apparent. Directions accompany the apparatus.

Improved Gas Blowpipe.

The gas supply is received through the valve tube by connecting it with rubber tubing to the gas bracket. The spring valve which regulates the supply of gas may be set by means of the thumb-screw and jam-nut, to any flame desired. It can also be used with the foot bellows when a more powerful blast is required, or with nitrous oxide to produce an oxyhydrogen flame.

Price.....$3.00

Blowpipe Pad.

The construction of the Pad makes it a perfect cushion, into which pins can be readily thrust to hold small articles while being soldered. One face is plane for soldering, the other has a depression for the melting cup.

Blow-Pipe Pad, complete, including removable rim, ingot-mould, one melting cup, handle and three spring clamps	$2 00
The same, less ingot-mould and melting cup	1 50
Extra melting cups, each, 15 cents; per doz	1 50
Ingot-moulds, separately	50
Removable rims, separately	25

Soldering Clamps.

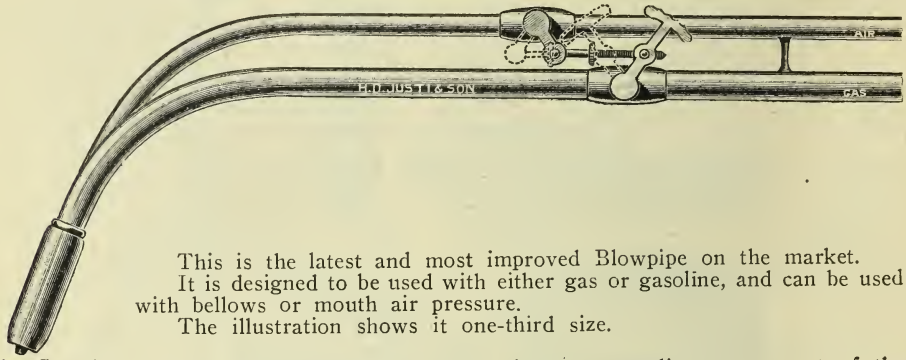
The slight pressure required to hold the work is secured by pushing the shanks into the handle, the spur of which may then be fixed in the pad or in a piece of charcoal, etc.

Price, per set of three clamps and one handle.....$1 00

The Star Blowpipe.

Made by H. D. Justi & Son.

For Crown and Bridge Work and all Soldering Purposes.



This is the latest and most improved Blowpipe on the market.

It is designed to be used with either gas or gasoline, and can be used with bellows or mouth air pressure.

The illustration shows it one-third size.

The Star Blowpipe is best adapted to the use of gas or gasoline on account of the arrangement of the valves, which are shown in the cut.

The thumb-trigger is used to control both the gas and the air at the same time.

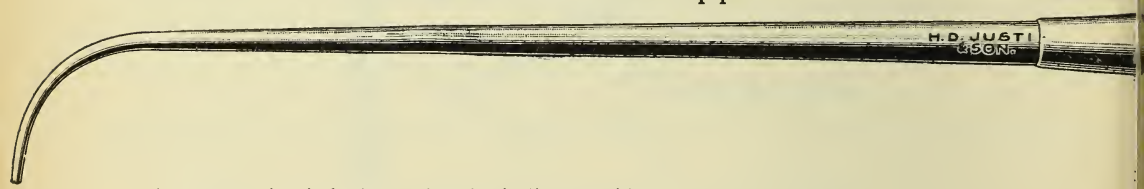
By the use of the threaded rod connecting the two valves the air supply can be adjusted to suit the gas pressure or amount of gas used.

This Blowpipe is so arranged that a portion of the air is mixed with the gas at a point about one and a half inches back from the blowpipe tip, thus giving a Bunsen flame as soon as ignited, this being a feature that is not found in any other blowpipe.

It can be used to good advantage in large cases and in brazing by taking off both tips.

Price $3.00

Haskell's Mouth Blowpipe.

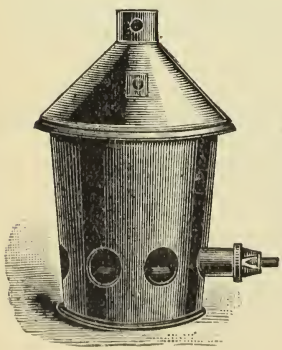


A proper dentist's Blowpipe is indispsensable.

The blowpipe sold and used by dentists is the small jeweler's pipe and totally unfit for dentists. The jeweler requires a small delicate flame for low-fusing solders; the mouthpiece is so small that it has to be taken inside the lips, which tires the muscles.

The dentist, using high fusing solders, with investment to heat and keep hot, requires a larger flame and mouthpiece to rest outside the lips, which is provided by the Haskell Blowpipe.

Price $0.75



No. 14. Ladle Furnace.

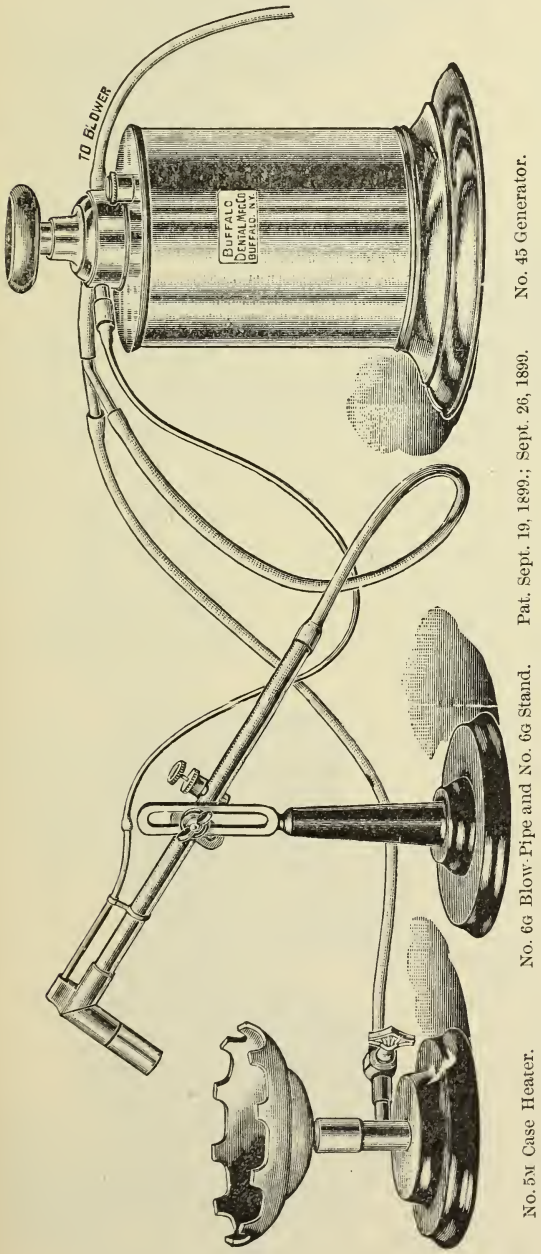
Made by Buffalo Dental Mfg. Co.

With Fletcher's No. 46 Solid Flame Heating Burner, for melting lead, tin or zinc for dentists' dies. This is a better ladle furnace in every respect than any other yet made. The burner is simple, safe, and works equally well with any gas supply available, giving proportionate speed of working. It can be removed from the casing and used for other purposes if desired. The worst possible accident to the burner can be remedied in a minute at the cost of a few cents. Gas supply pipe required, ⅜inch.

PRICE.

No. 14, Ladle Furnace (Ladles extra).....$3.50

No. 45 Gasoline Gas Generator with Blowpipe, Blowpipe Support and Case Heater.



No. 45 Generator. Pat. Sept. 19, 1899.; Sept. 26, 1899. No. 6G Blow-Pipe and No. 6G Stand. No. 5M Case Heater.

The illustration shows the No. 45 Gasoline Gas Generator supplied with a Case Heater in addition to the Blowpipe Support and Blow pipe.

The No. 5M Case Heater is constructed on the same general principles as the No. 6G Blowpipe, and equally powerful. It is mounted on a substantial base and surmounted by a cup, which can be filled with broken pumice or asbestos rope when used as a Case Heater. If required it can be used for heating water by using a pan larger than the circumference of the cup.

As will be observed in the engraving, it is connected to the gas outlet of the Generator by means of a Y, one branch of which goes to the Blowpipe as usual. The Case Heater is fitted with a stop cock for regulating the supply of gas and for shutting it off when required. It is sent out with the necessary amount of rubber tubing and Y connection, and the price includes these parts.

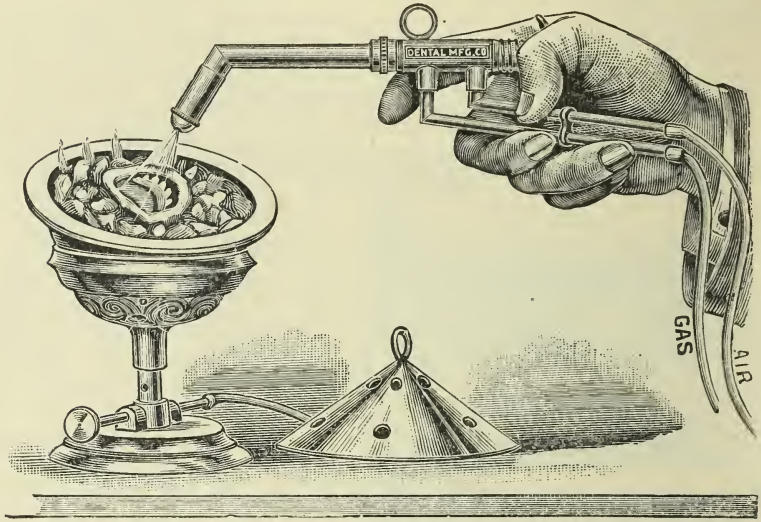
PRICES.

No. 45 Generator, No. 6G Blowpipe, No. 6G Stand, No. 5M Case Heater, rubber connecting tubing, reducer and Y, without Foot-Blower, as illustrated $14.00

No. 45 Generator, No. 6G Blowpipe, No. 6G Stand, No. 5M Case Heater, No. 9 Foot-Blower, rubber connecting tubing, reducer and Y, complete ready for use..$18.00

No. 5M Case Heater alone, with rubber tubing and Y.. 2.00

No. 5 J. Lewis Combined Case-Heater and Soldering Cup.



This simple device for drying out and soldering an investment of gold work without removing until completed, consists of an iron cup or hemisphere with suitable openings for the admission of heat from below, supported by another iron cup attached to an improved Bunsen burner, and rotating on it. The upper hemisphere is capable of being swiveled or tilted in any position desired to facilitate the flowing of the solder, and to bring all parts under the action of the blowpipe.

The cup is filled with pieces of broken pumice, or coils of asbestos rope, upon which the case rests. The position or angle of the cup can be changed by a slight pressure with the blowpipe on its flanged edge.

PRICES.

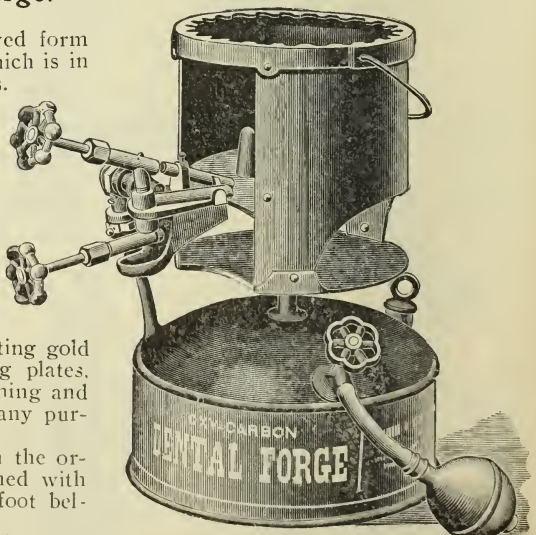
No. 5J. Lewis Combined Case-Heater and Soldering Cup.....$1.75
No. 6F. Blowpipe 3.00

The Oxy-Carbon Dental Forge.

For Gasoline.

This will be recognized as an improved form of the well-known plumber's furnace, which is in universal use among that class of artisans.

It gives a strong, steady and continuous heat, the flame being smokeless and nearly odorless, and is capable of operating continuously for a day if required, without any attention save an occasional compression of the rubber bulb, to keep up the pressure upon the contents of the reservoir. If put to continuous use for a day, it will consume about half a gallon of 74° gasoline, costing about eight cents.



The dentist will find use for it in melting gold or silver, preparing zinc dies, annealing plates, heating up investments, soldering, hardening and tempering instruments, and in fact for any purpose requiring strong heat.

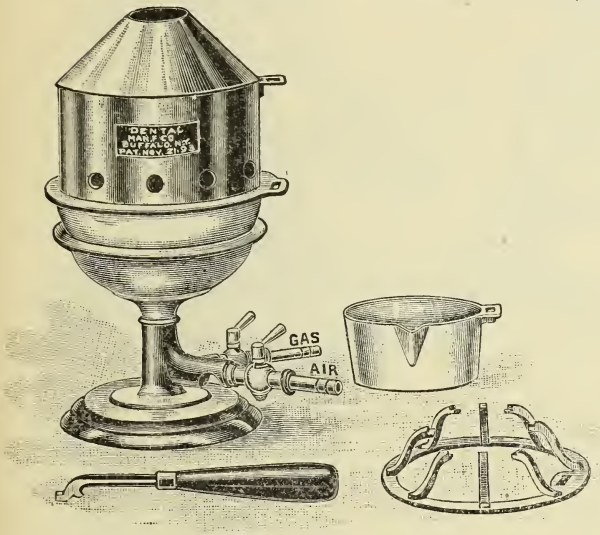
With the blowpipe flame, a blast from the ordinary mouth blowpipe may be combined with good effect, using either the mouth or foot bellows as an air supply.

The dimensions of the forge are as follows: Diameter of reservoir, 9 inches; height, with casing in place, as shown in illustration, 12 inches.

Price, Oxy-Carbon Dental Forge.....$10.00

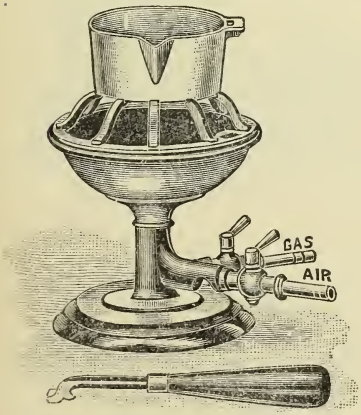
No. 5L. Lewis Combined Soldering and Ladle Furnace.

Patented November 21, 1893.



No. 5L. Furnace, Complete.

This Furnace, while retaining the swivel cup and revolving support used in the No. 5J, Case Heater, differs in every essential point from it, in that it can be used with blast, or without blast, as necessity demands. Its principal use is for drying out and heating up investments for gold work, the case remaining in the cup until the soldering is completed. It can also be used as a Ladle Furnace, and will melt lead, Babbit metal or zinc in a surprisingly short time.



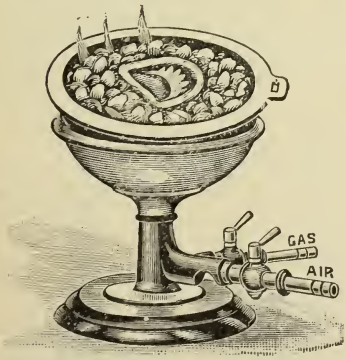
No. 5L. As a Ladle Furnace.

The capacity of the ladle is $3\frac{1}{2}$ lbs. Babbit metal, $2\frac{1}{2}$ lbs. zinc, or 4 lbs. lead. For convenience of handling, provision is made so that the ladle handle can be used to lift either the ladle, the ladle support, inner swivel cup or cover when hot.

Suitable Y's and reducers—i. e., metal pieces to reduce from one size rubber tubing to a smaller size—are sent out with every Furnace.

PRICE FOR NO. 5L FURNACE.

No. 5L, Combined Soldering and Ladle Furnace, complete..... ....$5.00

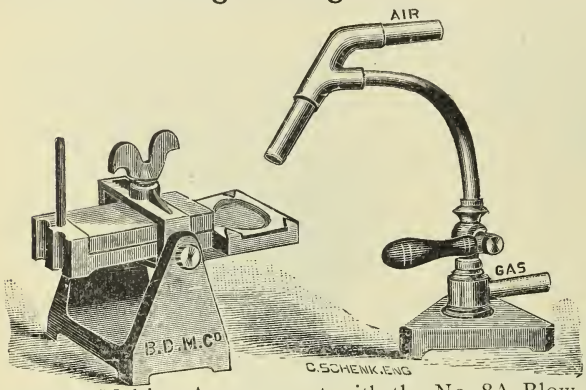


No. 5L, As a Soldering Furnace.

No. 5L, Combined Soldering and Ladle Furnace complete, includes base with burner, and two stop cocks, revolving cup, swivel-case heating-cup with pumice, ladle support, two ladles, hood, handle, two Y's, two reducers, two pieces of 5-16-inch rubber tubing for connecting Y's to stop cocks, and two pieces of $\frac{5}{16}$-inch rubber tubing for connecting Y's to reducers.

As the Y's, reducers and short pieces of rubber tubing are absolutely necessary for the proper connecting up of the Furnace, it will not be sold without them.

No. 8. Melting Arrangement.

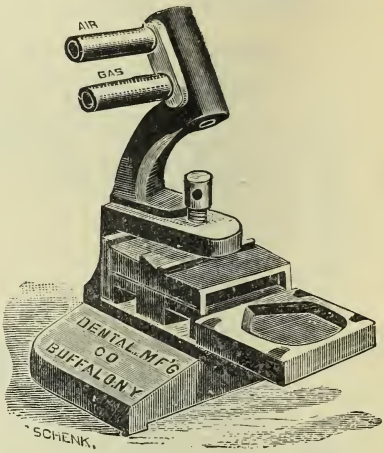


No. 8 Melting Arrangement with the No. 8A Blow-pipe. With this apparatus a sound 2-ounce ingot of gold or silver can be moulded in two minutes.

PRICES.

No. 8. Melting Arrangement, with both wire and plate moulds	$3.25
No. 8A. Blow-pipe, extra	2.25
Wire Moulds	1.25
Plate Moulds	1.25
Extra Carbon Crucibles, without slides, for No. 8, per doz	1.00
Extra Carbon Crucibles, with slides, for No. 8, per doz	1.75

No. 8D. Melting Arrangement.

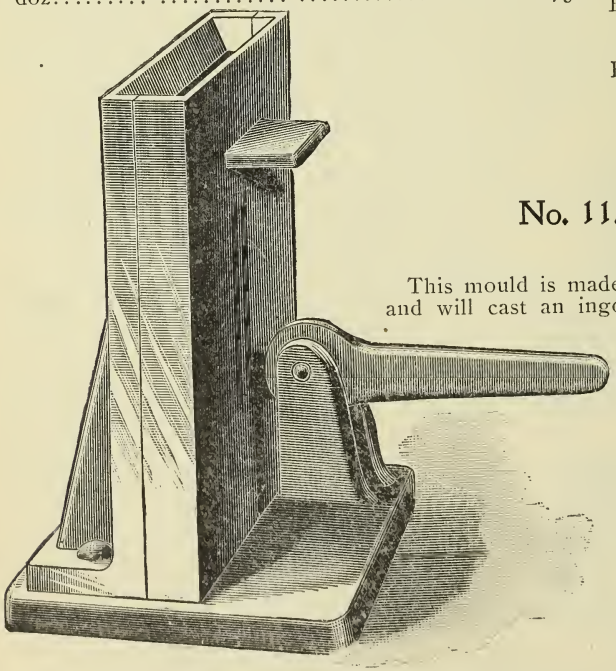


For melting up to two ounces of gold or silver rapidly, without the use of a furnace. For coal gas only.

PRICES.

No. 8D. Melting Arrangement	$3.00
Ingot Mould, if ordered separately	1.25
Extra carbon crucibles, without slides, for No. 8D, per doz	1.00
Extra carbon crucibles, with slides, for No. 8D, per doz.	1.75

No. 11. Ingot Mould.



This mould is made of iron, with faces planed true, and will cast an ingot 2⅝x2⅝x$\frac{3}{16}$ in. thick, and is adjustable for any less width. Attention is called to the cam fastening device; it is easily and quickly operated, and forces the sliding section of the mould down upon and in close contact with the base.

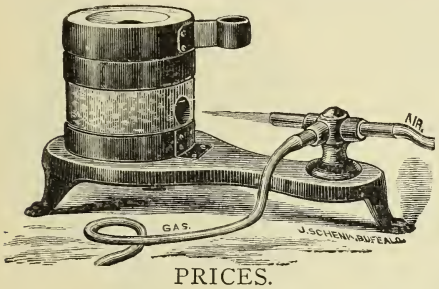
PRICE.

No. 11, Ingot Mould..$2.25

PRICES FOR ANTIMONY RUBBER TUBING.

Internal diameter $\frac{3}{16}$ inch	12 cents per foot.
Internal diameter $\frac{5}{16}$ inch	20 cents per foot.
Internal diameter $\frac{3}{8}$ inch	23 cents per foot.

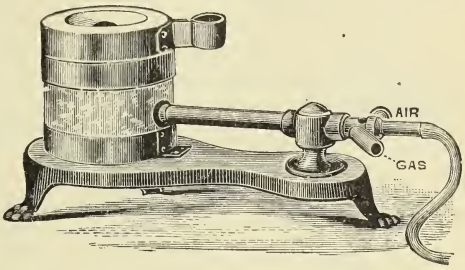
No. 40. Fletcher's Crucible Furnace.



PRICES.

No. 40. Crucible Furnace, with one No. 00 Crucible, without Foot-Blower $3.00
No. 40. Extra Furnace Body..... .75
No. 40. Extra Furnace Body and Cover 1.10
No. 40. Burner only 1.00
No. 40. Stand, less burner ..... .90
Plumbago Crucibles, No. 00, each.... .20

No. 40A. Crucible Furnace.



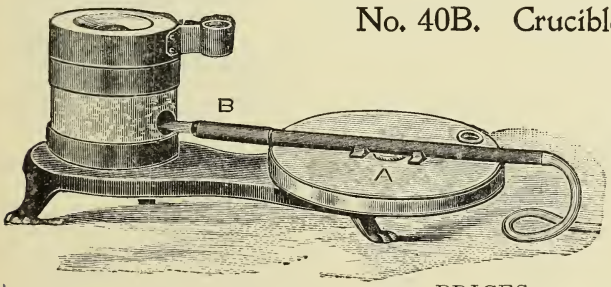
PRICES.

No. 40A. Crucible Furnace, with one No. 00 Crucible, without Foot-Blower $3.50
Extra Burner 1.50

For prices of Furnace parts, see No. 40.

No. 9a or 10a Foot Blower is recommended for either of these furnaces. They each take Crucible No. 00.

No. 40B. Crucible Furnace for Kerosene.



The burner for this Furnace is constructed upon the principle of an atomizer; this, of course, dispenses with a wick. It burns refined petroleum, instead of gas. It works just as well as a gas Furnace.

PRICES.

No. 40B. Crucible Furnace with one No. 00 Crucible, without Foot-Blower, ...$4.50
No. 40B. Petroleum Burner, separately..... 2.50
Plumbago Crucibles, No. 00, each..... .20

For prices of furnace parts, see No. 40.

No. 40A. Furnace.

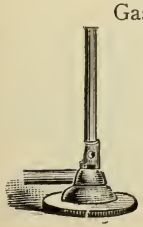
As used with No. 40C Gasoline Gas Generator.

Capacity of Generator, about one quart of gasoline. Size, 4x4x10 inches. The 74° gasoline, such as is used in vapor stoves, is suitable for use in this generator. Lower grades, usually sold as naphtha, do not give good results.

To those desiring a small furnace for high temperature, where gas is not available, this one will be found particularly satisfactory.

PRICES.

No. 40A Furnace, No. 40C Generator, No. 9A Foot-Blower and Tubing, complete for use.....$15.50
Gasoline Gas Generator No. 40C, alone..... 6.00



No. 2½. Bunsen Burner.

This burner is constructed wholly of brass and nicely adjusted. The flame is as near perfect as can be, and is preferred to any of the cheap Bunsens. The admission of air is controlled by a sleeve, which can be turned to entirely exclude the air. The inside diameter of the burner is $\frac{5}{16}$ inch; height, 5 inches.

Gas consumption, about three feet per hour.

PRICE—No. 2½. Brass Bunsen $1.00

Nos. 5A and 5B. Laboratory Gas Burners.

For Dentists, Druggists and Jewelers.

This burner is an admirable substitute for the alcohol lamp. It will be found very convenient for general heating purposes when used with spider.

Total height, 2½ inches

PRICES.

No. 5A. Laboratory Gas Burner.....$ .50
No. 5B. Laboratory Gas Burner, with Spider..... .75

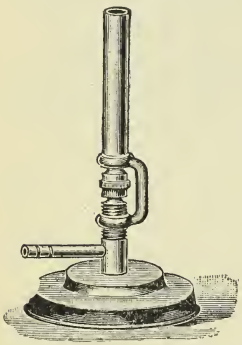
No. 5G. Adjustable Bunsen.

For Burning Gas of variable quality.

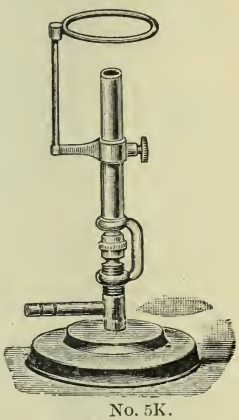
In this burner the size of the orifice through which the gas escapes is adjusted by turning the milled cap-nut seen inside the arm which supports the upright tube. The air supply is adjusted by screwing the arm up or down. It follows that any desired quantity of flame can be produced with it, and that it will burn any kind or quality or gas, rich or poor.

PRICES.

No. 5G. Adjustable Bunsen, on iron base $1.00
No. 5H. Adjustable Bunsen, on brass base, turned and polished 2.00
No. 5K. Adjustable Bunsen, iron base, with support 1.75
Support only ..... .75

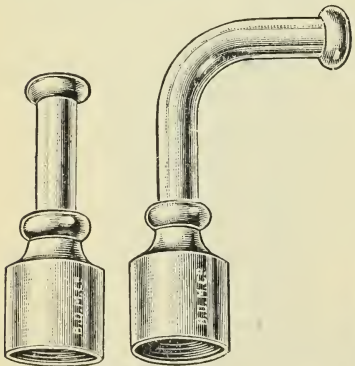


No. 5G. Patented Oct. 3, 1883.



No. 5K.

No. 117. Brass Connections.



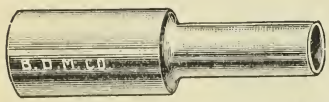
No. 117 No. 117A. No. 117B.

These connections are made of brass, polished and designed to be secured on gas fixture openings for attachment of rubber tubing leading to blowpipes, Bunsen burners or gas burners under dental vulcanizers.

PRICES.

No. 117. Brass connection straight .....$ .15
No. 117A. Brass connection, quarter turn ..... .25
No. 117B. Brass connection, half turn ..... .25

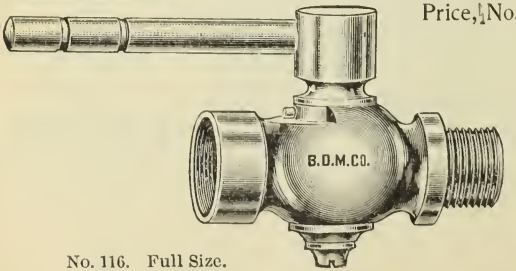
No. 118. Brass Reducer.



This reducer is made of brass, and is used to reduce the size of rubber connecting tubing from ⅜ or $\frac{5}{16}$ inch to $\frac{3}{16}$ inch. The ends are not threaded.

Price, No. 118. Brass Reducer.. .....$0.10

No. 116. Tap.

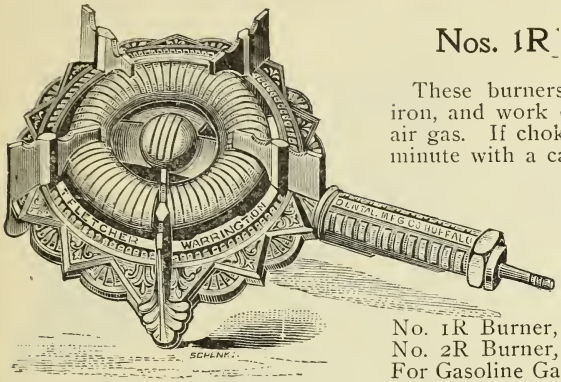


No. 116. Full Size.

This tap is nicely made and threaded on the female end to be attached to ⅛-inch gas pipe, or any ordinary gas fixture. The male end is threaded to receive any of the No. 117 brass connections.

PRICE.

No. 116. Gas Tap .....$ .50



Patented Jan. 1, 1884.

Nos. 1R and 2R. Radial Burners.

These burners are made entirely of annealed cast iron, and work equally well with either coal, water or air gas. If choked with dirt, they can be cleaned in a minute with a card or a knife.

Maximum gas consumption of No. 1R, 12 ft. per hour; No. 2R, 18 ft. per hour. The No. 2R is for vessels and pans from 10 to 18 inches in diameter.

PRICES.

No. 1R Burner, 3¾ inches diameter.....$1.50
No. 2R Burner, 5 inches diameter..... 2.00
For Gasoline Gas with Cap-nut Regulator, No. 1R, $1.70; No. 2R..... 2.30
For Gasoline Gas with Wheel Valve, No. 1R, $2.25; No. 2R..... 2.95

No. 46B.

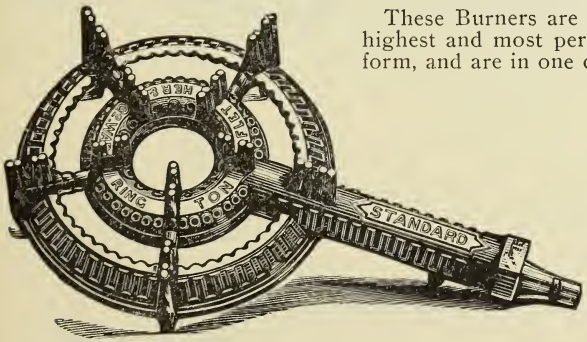
No. 46B. Fletcher's Solid Flame Burner.

This burner gives a flame perfectly free from smell. It is simple, strong, cheap, and of a power and adaptability unapproached by any known burner

PRICES.

No. 46B. Solid Flame Burner, capacity, 35 feet per hour $2.00
For Gasoline Gas, with Cap-Nut Regulator..... 2.30
For Gasoline Gas, with Wheel Valve..... 2.95
Extra Gauze Tops, each ..... .25

No. 310 to 320. Fletcher's Standard Boiling Burners.

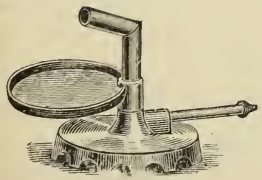


These Burners are designed as a complete series of the highest and most perfected class, in the simplest possible form, and are in one casting.

PRICES.

	Diameter across support for vessels:	
No. 310. Standard Boiling Burner, 10 feet per hour	5½ in.	$1.00
No. 315. Standard Boiling Burner, 15 feet per hour	7 in.	1.25
No. 320. Standard Boiling Burner, 20 feet per hour	8 in.	1.75

No. 5F. Lewis Waxing Burner.



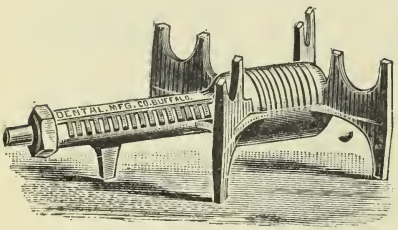
No. 5F.

The burner is constructed with an angle at its upper end, to prevent melted wax from running down the tube and clogging up the gas jet. A revolving drip-table is attached to the upright tube.

PRICE.

No. 5F. Lewis Waxing Burner.....$ .50

No. 3R. Radial Burner.

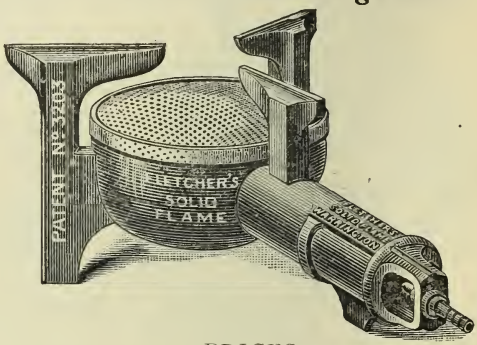


Patented Jan. 1, 1884.

This is in one casting, practically indestructible, and will boil water in a light kettle at the rate of 2 quarts in 12 minutes.

Price.—No. 3R.... ....$1.00

No. 47. Fletcher's Solid Flame Boiling Burner.



PRICES.

No. 47. Large size $2.00
For Gasoline Gas, with Wheel Valve. 2.95
For Gasoline Gas, with Cap-nut Regulator 2.30
Extra perforated copper caps ..... .25

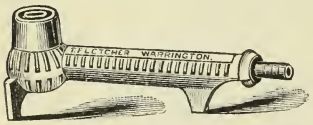
No. 47A. Solid Flame Boiling Burner.

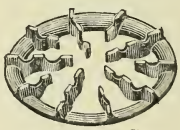
Same as No. 47, shown above, but smaller size.

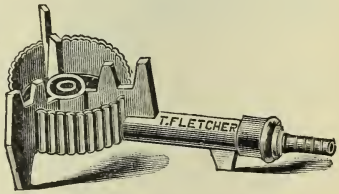
PRICES.

No. 47A. Capacity, 12 feet per hour.....$1.00
For Gasoline Gas, with Wheel Valve 1.75
For Gasoline Gas, with Cap-Nut Regulator 1.20
Extra perforated copper caps ..... .20

Nos. 200 and 201. Fletcher's Argand Bunsens.







A Cheap, Simple, Indestructible Burner for General Work.—The flame of these burners is shorter, more compact and higher in temperature than that of an ordinary Bunsen, and is also free from smell. The sizes given are the bore of the horizontal tube.

PRICES.

No. 200, ⅜-in. size, gas consumption, 2 feet per hour. Without Tripod.....$ .50
No. 200, ½-in. size, gas consumption 3½ feet per hour. Without Tripod..... .75
No. 200, ¾-in. size, gas consumption, 7 feet per hour. Without Tripod..... 1.00
No. 200, ⅜-in. size, gas consumption 2 feet per hour. With Tripod..... .65
No. 201, ½-in. size, gas consumption 3½ feet per hour. With Tripod..... .95
No. 201, ¾-in. size, gas consumption 7 feet per hour. With Tripod..... 1.25
Large Spider Ring (for No. 201, ¾-in. only)..... .30
Small Spider Ring (for 201, ½-in. or ¾-in.)..... .15

The "Purdy" Alcohol Lamp, for Soldering.

This popular Lamp is in the shape of a glass globe 3½ inches in diameter, set in a nickel-plated metallic base, which allows the Lamp to be placed at any angle for convenience. The burner carries a half-inch wick and is constructed so that the flame can be controlled at any desired height.

Price $1.50

Alcohol Soldering Lamps.

Illustrations of these lamps will be sent for the asking.

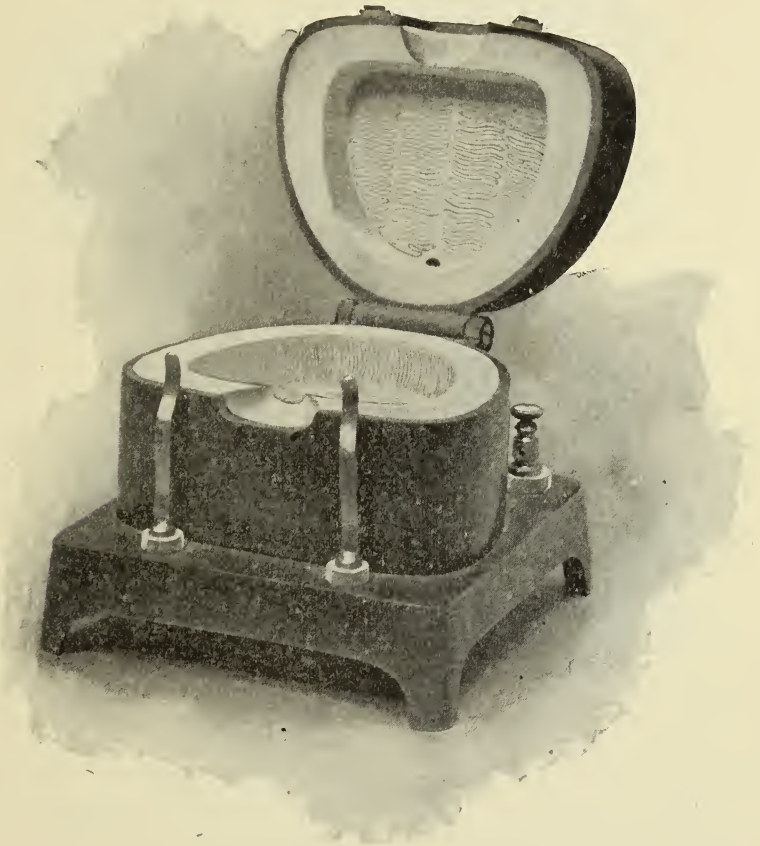
PRICES.

No. 7, Japanned $1.25
No. 8, Japanned 1.10
No. 9, Plain Tin 1.00
No. 10, Plain Tin 1.75
No. 11, Japanned 1.00

Custer Electric Oven.

Sole Agent, The Ransom & Randolph Co., Toledo, Ohio.

Protected by design patent, issued July 28, 1896; mechanical patents June 25, 1895, Oct. 8, 1895, Oct. 20, 1896, Jan. 4, 1898. Others pending.



Custer's Oven will fuse any dental porcelain in thirty minutes, costs but little to operate, is compact, and frees the room from heat, noise, dirt and odors. The heat produced is perfectly free from gas, and being easily controlled, prevents the possibility of over-heating or checking the case. The Oven can be operated by any electric current used for incandescent lighting, and repuires no electrical expert to set it up or work it.

Among others who use this Oven are the following well-known practitioners:

Dr. L. P. Haskell, Chicago, Ill.; Dr. W. B. Ames, Chicago, Ill.; Dr. G. J. Dennis, Chicago, Ill.; Dr. Geo. L. Field, Detroit, Mich.; Dr. W. H. Kessler, Detroit, Mich.; Dr. C. R. Yearick, Detroit, Mich.; Dr. S. H. Guilford, Philadelphia, Penn.; Dr. E. Parmly Brown, New York, N. Y.; Dr. Geo. E. Hunt, Indianapolis, Ind.; Dr. W. H. Jackson, Ann Arbor, Mich.; Dr. W. H. Todd, Columbus, Ohio; Dr. Grant Molyneaux, Cincinnati, Ohio; Dr. Kraus, Vienna, Austria.

The Custer Oven is made in four styles, fully explained in a booklet, "Modern Office Furnishings," which will be sent upon application.

PRICES.

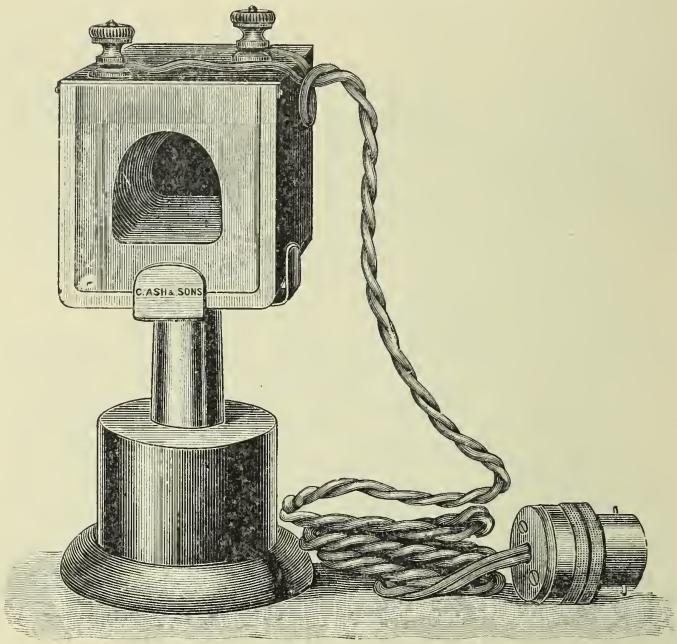
No. 1.	For Crowns and Bridge Work	$50.00
No. 2.	For Full Cases	65.00
No. 2.	Extra Large, for the Specialist	75.00
No. 3.	Haskell Pattern, for Full Cases	80.00

Above prices include rheostat, arc light and connections.

In ordering state full name of electric current to be used.

Mitchell's No. 1 Electric Furnace

For Inlays and Crowns.



ABOUT HALF-SIZE.

Inside measurements of Muffle, 2¼ inches long, ⅞ inch wide, ⅞ inch high.

Simple, efficient, cleanly, noiseless and safe.

The current required for working it can be obtained from any existing lamp socket.

Suitable for working on any main current, continuous or alternating.

Price of Furnace complete, with Wires and Plug, Nickel Tray for holding the work, tin of Ash's Investing Material, with directions for use, tin of Kaolin for repairing Muffle with directions for use and Card of Instructions for working the Furnace $15.00

Rheostat for Furnace $5.00

The above price of $15.00 is charged for the Furnace wound for any current between 50 and 120 volts; if required for more than 120 volts the price is $17.50. We stock it wound for 100 volts and 110 volts.

In ordering please state voltage for which it is required.

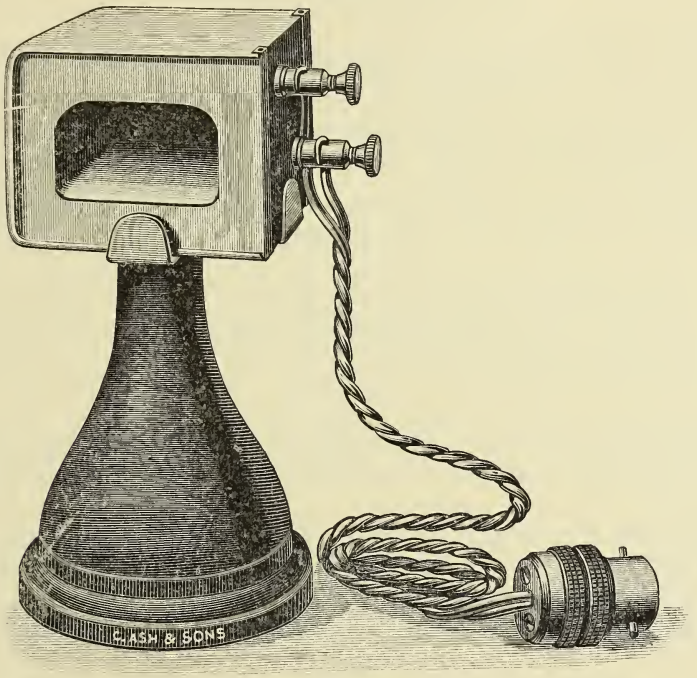
Electric Furnaces.

A piece of fairly thick Asbestos Cloth put on the floor of the Muffle of an Electric Furnace will greatly lessen the risk of short-circuiting, by preventing the tray coming in contact with the platinum wires should the fireclay be cracked. It will also prevent the work sticking to the floor should it from any cause roll off the platinum or nickel tray; moreover it tends to keep the heat uniform all over the Muffle.—C. A. & S.

Note.—Ash's Illustrated Pamphlet of Electric and Gas Furnaces suitable for all classes of Body work supplied on application.

Mitchell's No. 2 Electric Furnace.

For Inlays, Crowns and Sections.



ABOUT HALF-SIZE.

Inside measurements of Muffle, 2 inches long; 1½ inches wide; 1 inch deep.

This Furnace possesses all the features of the No. 1 Furnace over which it has the advantage of greater Muffle space.

Our Low-Fusing Mineral Body and Gum Enamel can be fused in either Furnace in a few minutes.

Price of Furnace complete, with Wires and Plug, Nickel Tray for holding the work, tin of Ash's fine Investing Material, with directions for use, tin of Kaolin for repairing Muffle with directions for use, and Card of Instructions for working the Furnace \$16.50

Rheostat for Furnace \$5.00

The above price of \$16.50 is charged for the Furnace wound for any current between 50 and 120 volts; if required for more than 120 volts the price is \$19.00.

We stock it wound for 100 volts and 110 volts.

In ordering please state voltage for which it is required.

Note.—Ash's Illustrated Pamphlet of Electric and Gas Furnaces suitable for all classes of Body work supplied on application.

Ash's Low-Fusing Mineral Bodies and Gum Enamel

For Making Inlays and Crowns.

Not recommended for Bridges and Continuous-Gum Work.

Very Dense, Can be Ground and Polished Like Our Mineral Teeth.

Suitable for Use with any Teeth. Can be fired in any Furnace adapted for Crown and Bridge Work.

These Materials fuse at a temperature of about 1,205 degrees Centigrade (2,200 degrees Fah.), and possess a beautiful, bright, lifelike surface, which gives them a most natural appearance in the mouth.

The claim made for them is that they do not change color, however long they may be subjected to the fluids of the mouth, provided they be properly fired.

To obtain the best results with them, they should be mixed to a putty-like consistency with the specially-prepared Mixing Liquid, which we supply for the purpose. It is of great importance to work the materials in as stiff a condition as possible, hence the reason for recommending a putty-like consistency.

Failure to remove as much of the moisture as possible with blotting-paper or amadou before firing will cause the Mineral Body or Enamel to be less dense and strong when fired than it otherwise would be.

Perhaps the most difficult part of the work is in the firing, but with care and experience this becomes quite easy. The chief point is to watch the work during the different stages of firing. For instance, the first firing should only be carried to the biscuiting stage, which, in a gas furnace, is reached in from one to two minutes, and in an electric furnace in from four to five minutes, starting all cold in each case. The Inlay is then built up and contoured as desired, the added Mineral Body being made nice and smooth on the surface by a few very gentle taps of the plaster mould upon the bench, and again fired until it is completely vitrified. This second firing does not take so long as the first firing, owing to the fact that the furnace is warm at starting. The operator can determine when the vitrified stage is reached by watching the work until a dark shade is seen to pass over it, which indicates the glazing process. The heat should then be cut off.

On no account must the firing be continued beyond this stage, or porosity will result from the over-firing.

Ash's High-Fusing Mineral Bodies and Gum Enamels Perfectly Suitable for Bridges and Continuous-Gum Sets.

Adapted for Use with any Teeth.

We have now made arrangements whereby we can guarantee that the fused specimens supplied with the box perfectly match the colors in the bottles.

The new Gum Enamel, lately introduced, is prepared in two shades—159B Light and 162B Dark, both of which are much admired by those who have used or seen them.

The Mineral Body is prepared in the following six shades—the light part of our B|1, B|3, C|2, E|2, F|2, and the dark part of our B|4.

By mixing together varying proportions of the Gum Enamels a considerable number of different shades can be obtained.

The Bottles in the Box Mentioned Below Contain a Quarter of an Ounce Each.

PRICES:

Box containing six bottles of Mineral Body, two bottles of Gum Enamel, Nickel-plated Spatula and Camel-hair Pencil..... complete $ 6.00

Separately—

Mineral Body, any shade named above, per ¼ oz, bottle		0.75
Gum Enamel, either shade, per ¼ oz. bottle		0.75
Spatula, Nickel-plated	each	0.50
Mixing Liquid, in two-ounce bottles	per bottle	0.25

Quantity Rates—

Mineral Body, any shade named above	per oz.	1.50
In 5 oz. lots, one shade or assorted shades	per lot	6.50
Gum Enamel, either shade named above	per oz.	3.00
In 5 oz. lots, either shade or assorted in both	per lot	14.00

NOTE.—We are prepared to supply to order by the ounce any special shade of our High-Fusing Mineral Body at $1.50 per ounce, or Gum Enamel at $3.00 per ounce, on condition that a pattern tooth or gum section is sent to us showing the exact shade required.

NOTE.—Ash's special Illustrated Pamphlet on Inlays, Crowns, Bridges and continuous Gum work supplied on application.

Miscellaneous Bodies and Enamels.

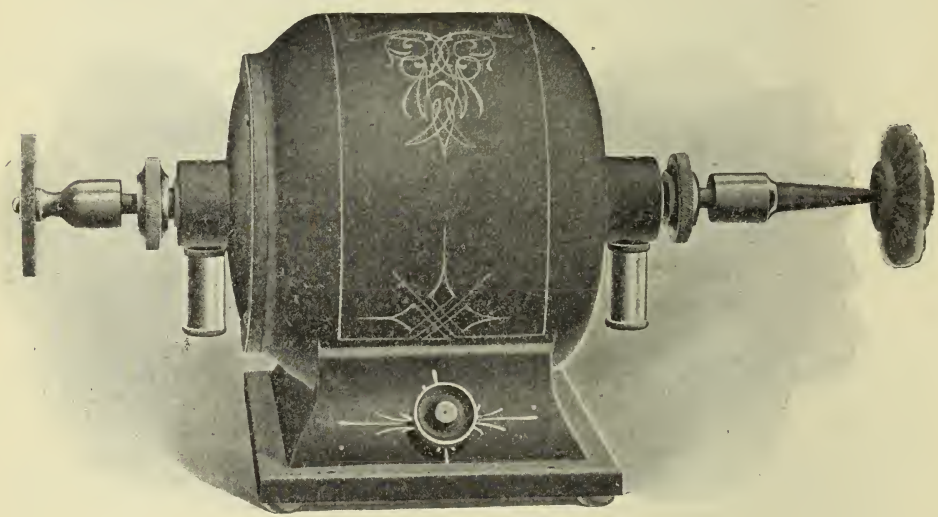
Bodies, Allens, for Continuous Gum Work, The S. S. W. D. M. Co.'s	per oz.	$1.50
Allens, for Continuous Gum Work, Dr. Close's	per oz.	1.50
Tees, for Continuous Gum Work	per lb.	2.00
Block	per lb.	2.50
Lukens "A"	per lb.	2.50
Enamels, Allens, for Continuous Gum Work, The S. S. W. D. M. Co.'s	per oz.	2.50
Allens, for Continuous Gum Work, Dr. Close's	per oz.	2.50
Tees, for Continuous Gum Work	per oz.	2.50
The S. S. W. D. M. Co.'s, for Blocks	per oz.	2.00
The S. S. W. D. M. Co.'s, for Point and Base	per oz.	.38
For Coloring Porcelain Teeth, Poulsons	per box	7.50

The Ritter Dental Mfg. Co.'s Dental Chair and Electrical Dental Engines

Received the Highest Award at the Paris Exposition, 1900.

The Columbia Electric Laboratory Lathe.

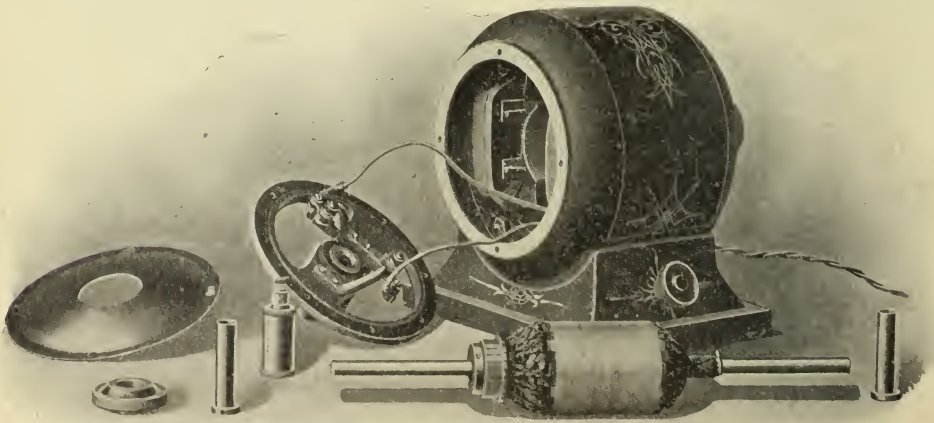
Made by The Ritter Dental Mfg, Co.



The chucks for carrying carborundum or other grinding wheels are placed directly on the end of the shaft. The chucks have a slightly tapering hole, and the shaft bears a tapering end to correspond. To put a chuck on, place it over the shaft and give it a slight tap with the hand. The knurled nuts seen on the ends of the bearings are for the purpose of forcing the chucks off the shaft, by giving them a few turns forward. It has sufficient weight so it will not move when doing heavy grinding. It has an entirely emery and dust-proof case, and is free from the destructive sparking at the commutator and switch.

The small knob on the front of the motor controls the speed.

It is handsomely finished in black japan and gold striping.

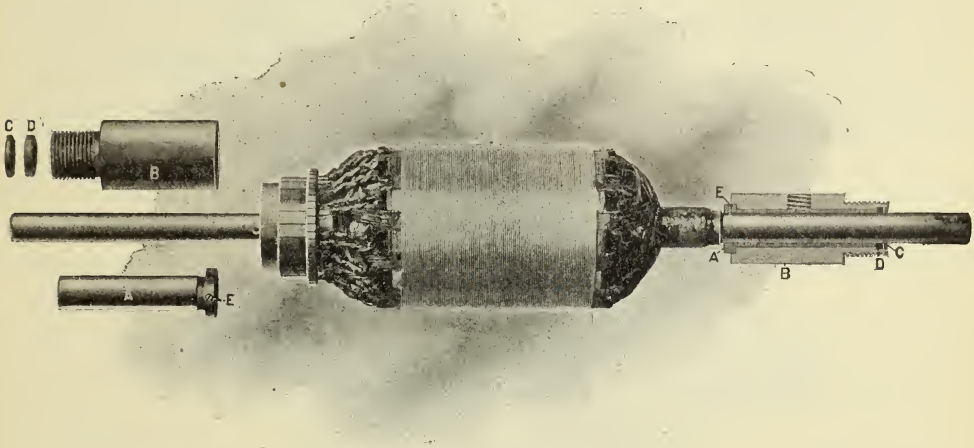


The Columbia Electric Laboratory Lathe—Continued.

Construction of Lathe Armature.

The adjoining illustration clearly shows a very important improvement in the construction of the armature shaft and bearings of our Electric Laboratory Lathe.

We can assure you this desirable construction alone recommends our lathe in preference to all others. Our competitors will say about their motors, "If the bearings wear out we can send you new ones." But bear in mind, when the bearings are badly worn the shaft must be in a similar condition.



A shows a steel sleeve or tube, placed over the shaft of the armature.

E is a small screw with which the steel tube is held on the shaft.

B shows the phosphor bronze bearings in which the steel tube revolves, and with it the armature.

D is a felt washer placed in the recess, shown in the end of the bronze bearing "B."

C is a brass washer pressed over the tapering end of the armature shaft to hold the felt washer in place, and this practically excludes pumice stone and emery from the bearings.

In this method of constructing bearings, the wear will take place on the steel tubes "A" instead of on the shaft and on the bronze bearings in "B." As these are all made on the interchangeable plan, when they are worn they can be removed and new ones be put on in a few minutes. The importance of this construction must be evident. Without it, if the shaft is worn, the only way to make repairs is by putting in an entirely new armature (the revolving portion), necessitating great expense.

When you buy a Columbia Lathe, you always get the benefit of our wide experience.

Sleeves "A" and Bearings "B," per set, $3 50.

PRICES.

Laboratory Lathe for 110-volt current, including 7 chucks and one bur chuck	$44 00
Laboratory Lathe for 6-volt Battery	44 00
Laboratory Lathe without chucks	40 00
Special reducing resistance for operating 110-volt lathe on 220-volt circuit	6 00
Storage battery to run 6-volt Lathe	35 00

(The 6-volt Battery will run both Engine and Lathe.)

The first six chucks are for holding various size grinding wheels, cotton wheels and brushes. No. 1 has a hub ⅜-inch in diameter; No. 2, 5-16-inch; No. 3, 3-16-inch; No. 4, ⅛-inch; No. 5, ¼-inch left; No. 6, ⅛-inch left; No. 7 is a left-screw cone for felt wheels and cones. No. 8 is a chuck for holding either No. 6 or No. 7 handpiece burs.

PRICES.

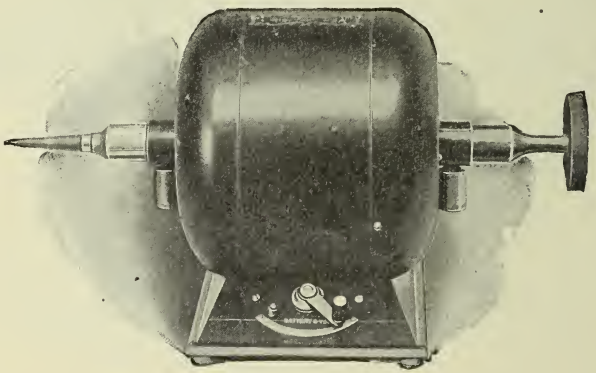
Chucks Nos. 1, 2, 3, 4, 5 and 6, each	$ 35
Chuck No. 7, $1.00; Chuck No. 8, when purchased separately	2 50

If ordering the Lathe with less than full set of chucks, each chuck will be charged according to above price list

The Browning Laboratory Lathe.

Made by The Browning Mfg. Co.. Milwaukee, Wis.

The Laboratory is certainly deficient without a well made electrical lathe with plenty of power and with a low speed for grinding and a high speed for polishing. The Browning Lathe has these requirements, actually, having three speeds —one very low and one very high. Dust proof. Shaft and armature large, consistent with power and endurance. Right and left chucks with different finishes for distinguishing them. Most simple device for attaching and detaching chucks. One chuck for holding engine burs, drills, discs, stones, etc.



PRICES—Including 10 Chucks.

110 volt	.....	$44.00
220 "	.....	49.00
500 "	with resistance	54.00

Combined Engine-Lathe.

By fitting Lathe with reverse attachment and placing a pulley on its shaft with separate controller at chair as for engine, to which wires are run from Lathe, a belt running from Lathe pulley to any form of several suspension engines. Operator may have Lathe and Engine combined.

PRICES—Including Chucks.

110 volt	.....	$75.00
220 "	.....	80.00
500 "	.....	85.00

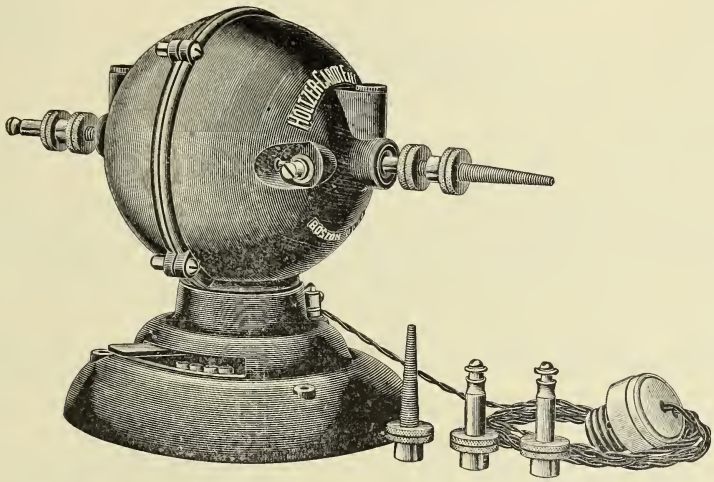
PRICES OF CHUCKS.

9 regular chucks, each	.50
Drill or burr chuck	2.50
Sandpaper chuck	.50

Write for Question Book Sheet and Direction Book.

Dental Lathe Motor.

Made by The Holtzer-Cabot Electric Co., Brookline, Mass.



The dental profession has been quick to recognize the advantages of the electric current as a source of power in their work and in the laboratory of the dentists in this country the electric motor is fast replacing all other sources of power. Many dentists, however, have hesitated to adopt electric motors for they suppose that a special knowledge of such machines was essential for their satisfactory operation. So far from this being the case there is really no machine that is so easily controlled and is less liable to get out of order. We refer, of course, to a motor built on up-to-date principles in a thoroughly mechanical manner.

The attached cut illustrates the Holtzer-Cabot special dental lathe motor which has been specially designed both as regards construction, exterior shape and operation for the particular needs of the dental profession.

This machine has a spherical body which completely encloses the armature and commutator, thus protecting these vital parts from dust and injury. The shape also admits of the most compact construction for a given power so that the light is not obstructed; neither is the movement of the hand limited in the slightest degree in the performance of work. The motor runs noiselessly and will develop 1-6 H. P.; thus it is of ample capacity to meet any requirements that such a machine would be called upon to perform. The H—C Dental Lathe Motor is equipped with a 4-speed regulating switch under the direct control of the operator, which gives a wide range suitable for different operations necessary in practical dentistry. The chucks and mandrels (five in number) are designed especially for the work; they run perfectly true at all times and their construction admits of rapid change and adjustment. The different buffs and polishing devices used by dentists can be accommodated as well as securely and quickly attached with very little trouble.

The mechanical construction of the motor can not be surpassed. The shaft is made of crucible steel and ground to gauge, and every detail of work has been carefully considered. The electrical design also conforms to the best practice, so that power is obtained in the most efficient manner and at a minimum cost in current consumption.

We are at present building these machines wound for the standard 110 volts D. C. lighting service, but can furnish them wound to 6, 10 or 12 volts, so that they can be used in connection with storage batteries.

Price, including Five Chucks.....$40.00

Electric Laboratory Lathe.

Arranged to be Operated by the 110-volt Direct Current.
Made by The S. S. White Dental Mfg. Co.

PRICES.

Electric Laboratory Lathe complete, including Clutch Lathe-Head and 10 Mandrels, Lathe-Stand, ⅛ Horse-Power Motor, Variable Resistance, and Foot-Pedal.....$64.50
Electric Laboratory Lathe complete, including Unique Lathe-Head and 8 Chucks.... 60.50
Boxing 2.00
Other Motors and other Lathe-Heads can be substituted at value.

PARTS SEPARATELY.

Lathe-Table	$10.00
110-Volt Lathe-Motor	28.00
New Iron and Enamel Variable Resistance	12.00
Foot-Pedal	1.50

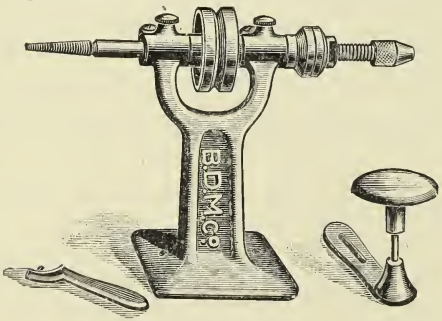
USE THE BACKUS WATER MOTOR

for driving your lathes and light machinery. Send to us for booklet issued by The Backus Water Motor Co., of Newark, N. J.

Niagara Lathe Head and Stand.

This lathe has been carefully designed throughout; and while it can be afforded at a less price than many others, it will be found on examination to be of good workmanship, of ample strength, and convenient in use.

The head has a taper screw for brushes, a parting-nut for carrying a large wheel, and a split chuck for carrying pin-chucks.



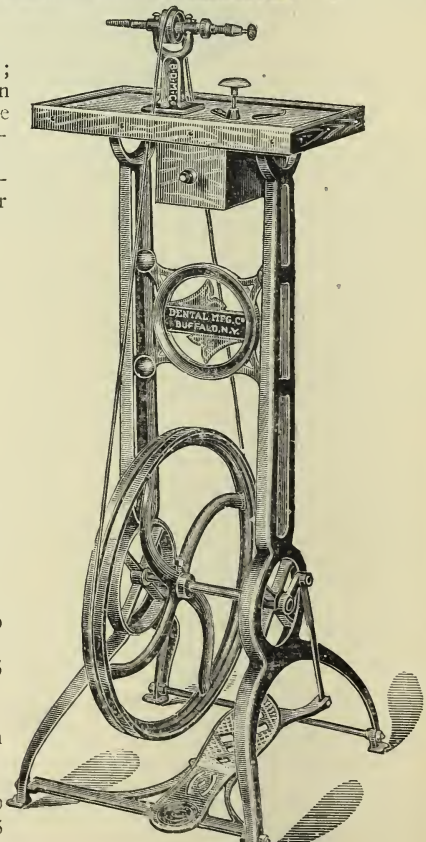
PRICES.

Niagara Lathe Head and Stand, complete ...$9.00
Niagara Lathe Stand only..... 7.00
Niagara Lathe Head only..... 2.00
Niagara Lathe Hand Rest only..... .35

The S. S. White Dental Office Lathe.

An upright lathe with cover for head and 10 inch driving wheel.

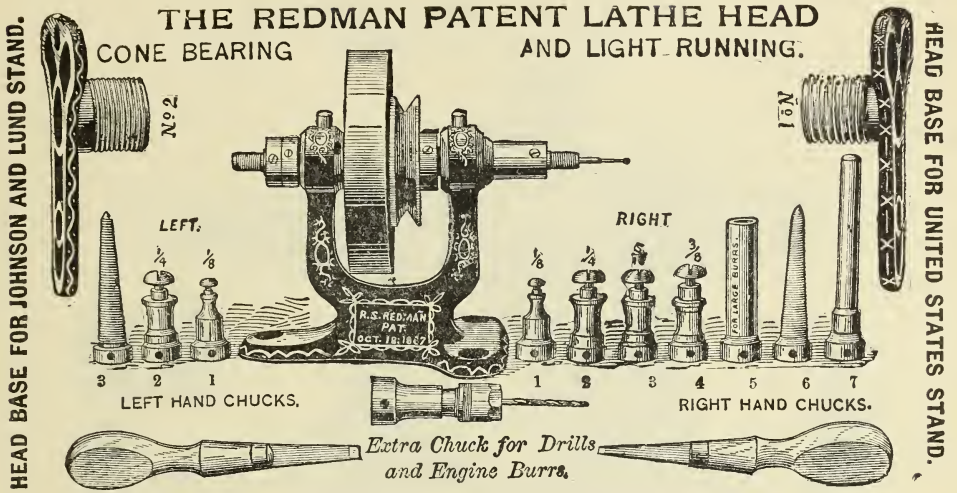
Price of Lathe, with a set of six Corundum Wheels $20.00
Boxing ..... .75
Head separately, without Chucks..... 3.00



The S. S. White Laboratory Lathe.

An upright lathe with cover. Occupies floor space of 10x23 inches.

Price of Lathe complete, with Chucks.....$25.00
Boxing..... 1.00



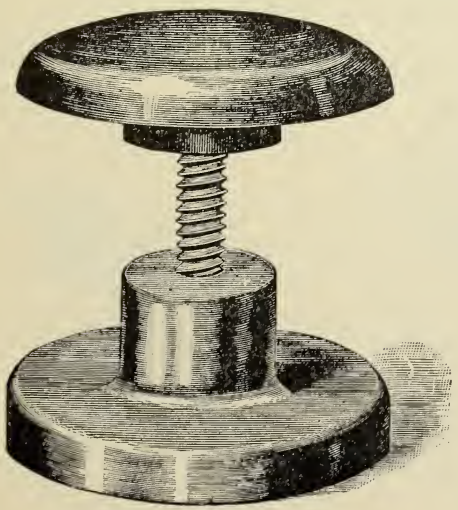
A Lathe Head of one kind or another may be bought almost anywhere, but there's an art in making a really good Head, which is only known to experienced Fine Tool and Machine makers, and the Redman Head comes from such a shop. It is made by the same skilled workmen and tools that turn out Lathes costing hundreds of dollars each.

If you've been in practice for a generation past you have used, seen used, or heard of the "Redman" Cone Bearing and Light Running Lathe Head during all these years; did you ever even hear of one being unsatisfactory?

PRICES.

The Redman Lathe Head, complete, with 10 Chucks	$8.50
Chuck for Drills and Engine Burr, extra	2.00
Extra Brass Chucks	.25
Hand Rest for Turning	.50
Head Base for United States or Johnson & Lund Stand	.50
For Office Use, with the whole head polished nickel plated and ornamented	10.00

GIDEON SIBLEY, Sole Agent.



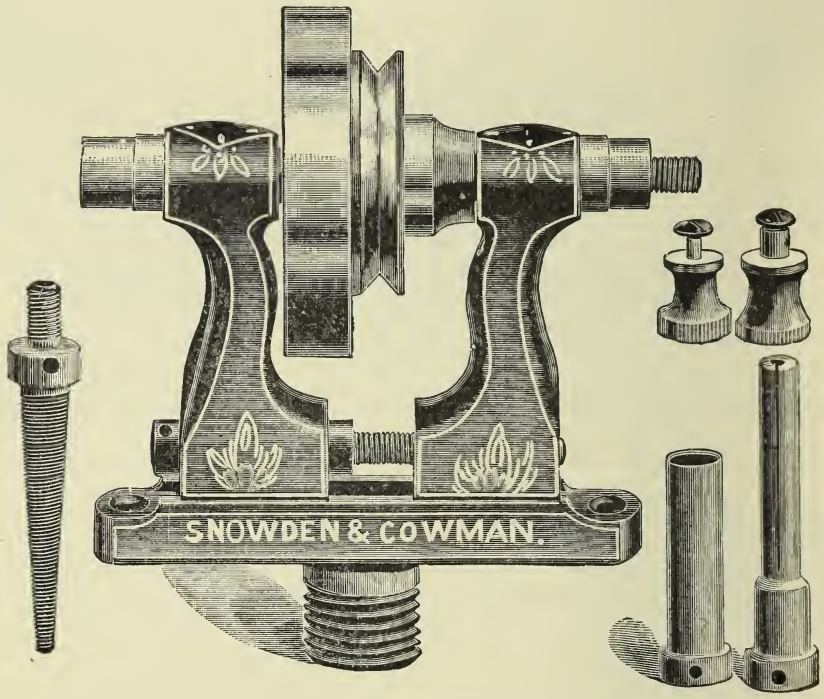
Rest or Hand-Support.

A useful auxiliary to the laboratory lathe. It affords an easy, comfortable support for the hand, as for instance, in grinding teeth, and enables the operator to hold the work steadily against the carborundum wheel. It can be adjusted to the proper height by means of the screw. Made of metal, japanned.

Price ..... each $0.35

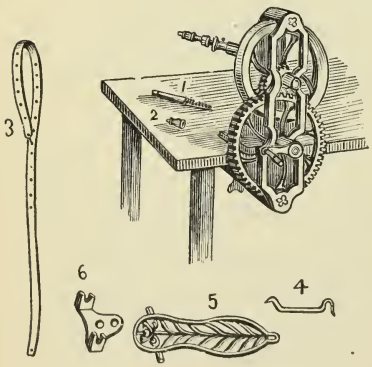
New Improved Cone Lathe Head.

Made by Snowden & Cowan Mfg. Co.



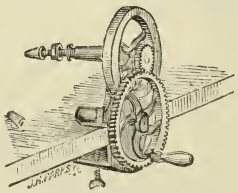
No more lost motion.
Can be used with any driving wheel.

All lost motion or wear can be taken up by the simple adjusting of screw on base. It is made very strong and durable. It runs easier than any Lathe Head on the market. Fitted to run on either U. S. Lathe Stand or the American Lathe Stand. Price with 5 chucks $7.00

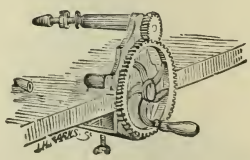


Portable Hand and Foot Lathe.

Weight under 7 pounds, and occupies a space of 6x9 inches. Price, complete, $5.50.
without foot attachment, $5.00.

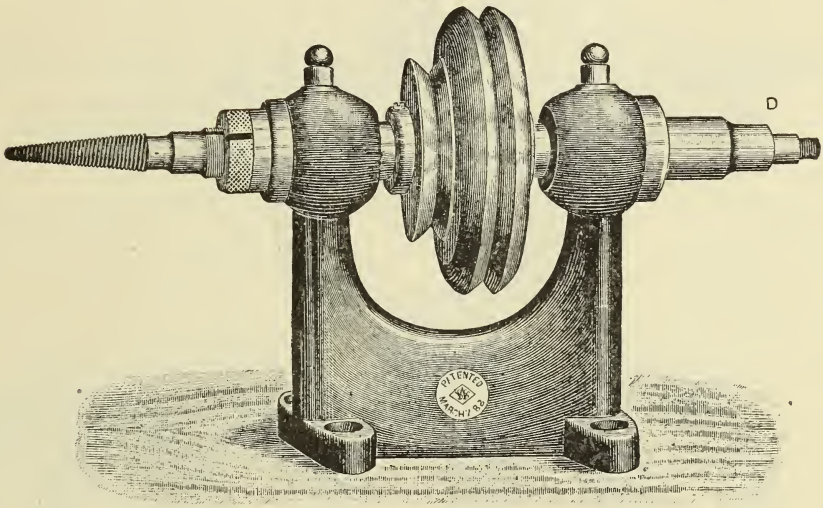


Hand Fly Wheel Lathe is an intermediate between the Hand Lathe and the Hand and Foot Lathe; weight only 3 pounds. Price, $4.50.



Hand Lathe.—Small, strong and durable, weight 2¼ pounds. Price, $4.00.

Unique Lathe-head.



PRICES.

Unique Lathe-Head, with Chucks Nos. 1 to 8.....$9.00
Unique Lathe-Head, without Chucks..... 6.50
Sponge holder for unique Lathe..... .30

The Unique Lathe.

A combination of above head and Whites No. 4 Driving Wheel mounted together.
Price, complete, including set of 8 chucks.....$25.00

Our New Lathe Head.

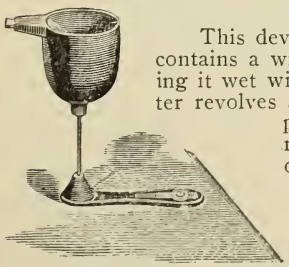
Made by Snowden & Cowman Mfg. Co.

This is a very durable and steady lathe head. It isn't made to take the place of the cheap jewelers' lathe heads because it is better made and sells for more money, but it will be found to be very simple in construction and decidedly easy running.

The price includes four chucks—two screw head for Carborundum brush and felt wheels, one for carrying a vulcanite bur and one for sand paper.

Price, with four chucks $5.00

The Brown Lathe Bath.



This device is believed to be one of the most perfect of its kind; the cup contains a wick, which is applied to the surface of the grinding wheel keeping it wet without flooding it. The cup revolves on the pedestal and the latter revolves and slides on the screw which enters the bench, thus making it perfectly adjustable. It can be fitted to any lathe by cutting the rod to the proper length. When used for the first time, that part of the wick contained in the tube should be wet.

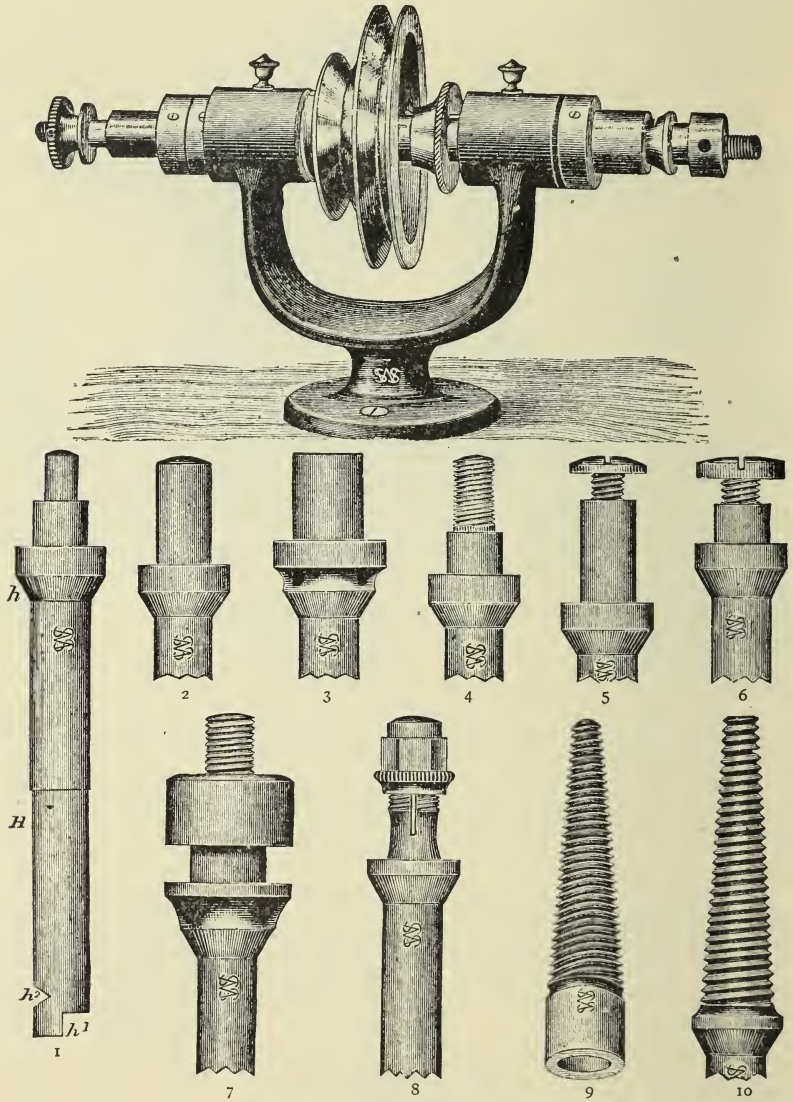
PRICE.

Brown's Lathe Bath..... 50 cents.

Lathe Bath or Drip Cup with Sponge.

Price with sponge..... 25c

Clutch Lathe-Head, with Cone-Journals and Cone-Mandrels.



PRICES.

Head, complete, with 10 Mandrels.....$13.00

PARTS SEPARATELY.

Head without Mandrels	$ 9.00	Mandrels No. 4, with thread for Lawrence Lathe-Chucks	each, $ .30
Mandrels Nos. 1, 2 and 9	each, .25	Mandrels Nos. 5 and 6	" .45
Mandrels No. 3	" .35	Mandrels Nos. 7 and 10	" .60
Mandrels No. 4, with thread for Laboratory Lathe-Chucks	" .30	Mandrels No. 8	" 1.00

Lathe-Cord and Couplings.

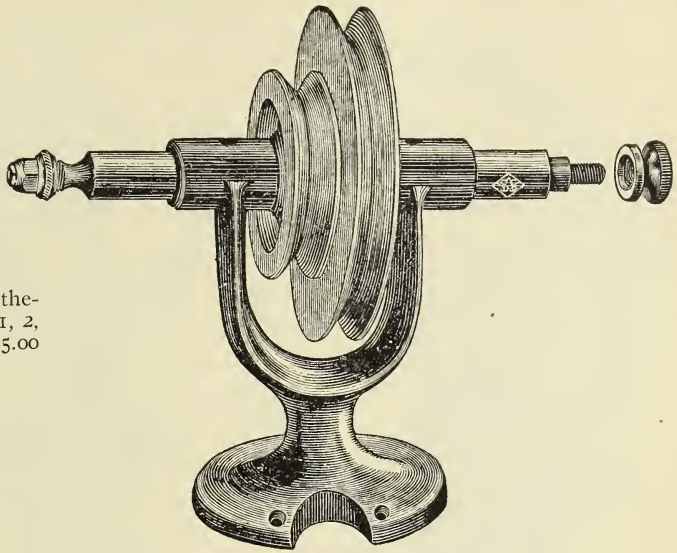
These Couplings are made of iron with a threaded hole in each end into which the Leather Cord can be screwed.

Price .....per set $0.25

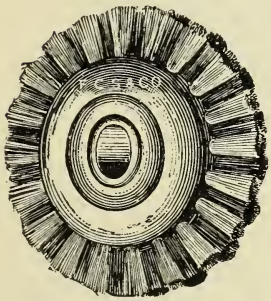
Leather Lathe-Cord.....per foot $0.07

The S. S. White Laboratory Lathe Head.

Price, No. 3 Laboratory Lathe-Head, with Chucks Nos. 1, 2, 3, 4, and Wrench.....$5.00



No. 3.



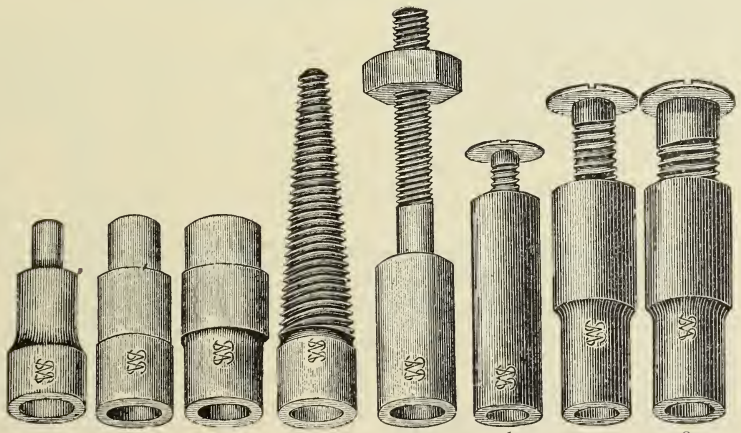
Large Wire Wheel.

Suggested by Dr. J. M. Whitney.

For cleansing engine tools (burs) and files and dressing down celluloid and rubber plates. It is shown full size; 1⅝ inches in diameter, two rows of fine steel wire.

Price, each..... 50 cents

Laboratory Lathe Chucks.



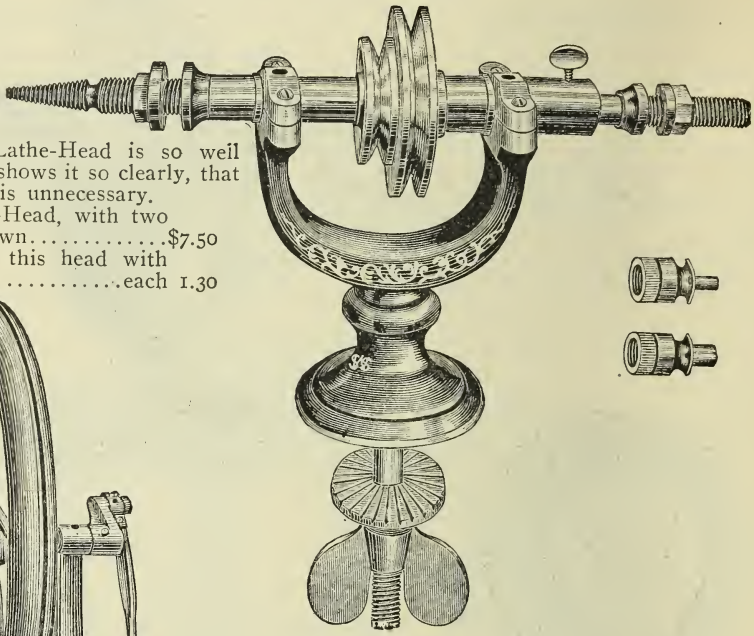
1 2 3 4 5 6 7 8

Made with a plain collar on the inner end, and a screw at the lower end of the hole. They run perfectly true. Nos. 1, 2, 3 are for corundum wheels, which are fastened on with shellac. No. 1 carries wheels Nos. 00 to 4. No. 2 carries Nos. 5, 6, 7. No. 3 carries Nos. 8, 9, 10. No. 4 is a screw-cone, very convenient for felt wheels and cones. No. 5, collar-and-nut Chuck for brush wheels, cotton wheels, etc. Nos. 6, 7, 8, collar-and-screw Chucks for Carborundum wheels.

PRICES.

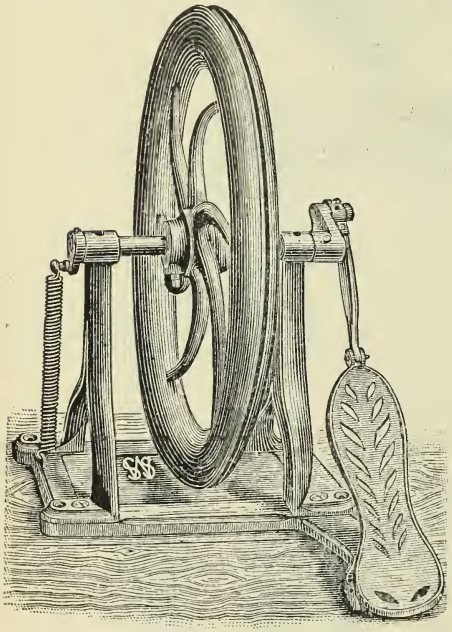
Chucks Nos. 1, 2, 3.....each,	$0.15	Chuck No. 6.....each,	$0.40
Chuck No. 4.....each,	.25	Chuck No. 7.....each,	.50
Chuck No. 5.....each,	.50	Chuck No. 8.....each,	.60

The Lawrence Lathe-Head.



The Lawrence Lathe-Head is so well known, and the cut shows it so clearly, that detailed description is unnecessary.

Price, Iron Lathe-Head, with two Chucks, as shown.....$7.50
Slip Mandrel for this head with two Chucks .....each 1.30



The Lawrence Driving Wheel No. 1.

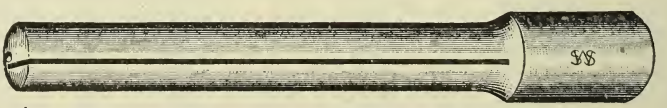
Driving Wheel.....$12.00
Boxing Wheel 1.00
Springs for Wheel 1.00
Treadle for Wheel 1.25

Adjustable Drip Cup for Lathes.

The Cup is adjustable on the stem and is held at any desired height by a clamp.

Price, Plain Brass.....$1.00
Price, Nickel-plated 1.25

Lathe-Arbor for Sand Paper, etc.



This Arbor is made of brass After cutting the sand, emery, or other paper to proper size, say two and one-half inches square, one edge of it is slipped into the groove and the paper is wrapped around the Arbor. It will be held in place by the motion of the Lathe.

Price for Redman Lathe-Head $0.25
Price for all S. S. W. Heads..... .30

Felt-Wheel Chuck No. 9.

Suggested by F. E. Pomeroy.

This Chuck, made of brass, is provided with steel pins, which prevent the wheel from revolving on the Chuck.

Price ....each $0.50

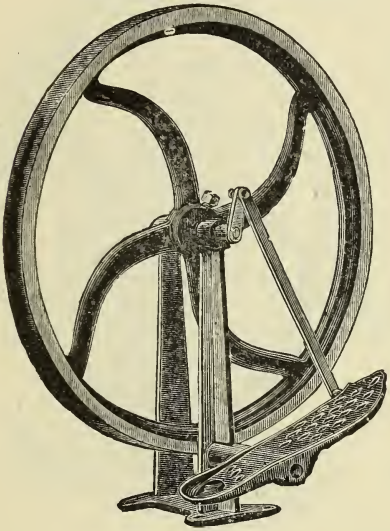
Engine Bit Chuck No. 10.

No. 10 is a split Chuck for carrying Engine-Bits. It is adapted to Unique and Office and Labaratory Lathes.

If desired for bits carried by No. 6 Hand-Piece, please specify.

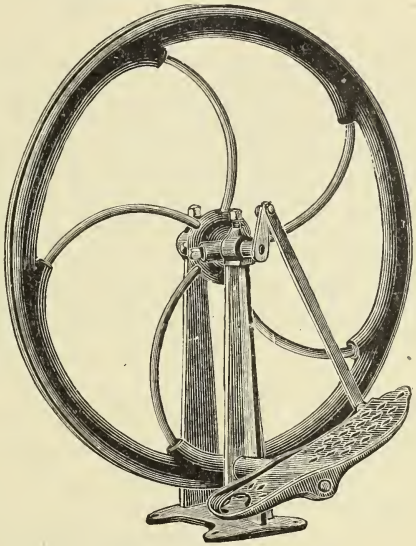
Price ....each $1.00

Driving Wheel No. 1.



NO. 1 ROCKING TREADLE.

Driving Wheel No. 2.



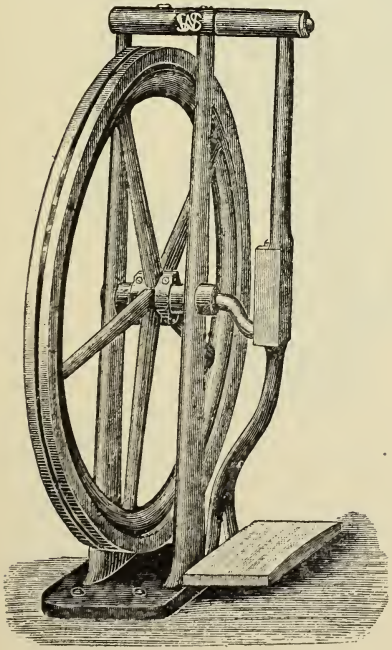
NO. 2. ROCKING TREADLE.

No. 1. This is a cast-iron wheel, eighteen inches in diameter, weighing twenty pounds. Total weight, as illustrated, twenty-eight pounds. The rim is grooved for use with a round belt or cord.

Price.—Driving Wheel No. 1.....$3.00

No. 2. This is a heavy cast-iron rim with arms of three-eighths round steel. The weight is thus thrown principally into the rim of the wheel, making it a very effective one for the weight. Diameter, twenty inches; weight, twenty-five pounds; total weight, thirty-three pounds.

Price.—Driving Wheel No. 2.....$6.00

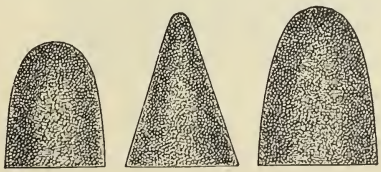


S. S. White Driving Wheel No. 4.

The diameter of the wheel is 21 inches, and its weight about 38 pounds; total weight of wheel and frame about 68 pounds.

Price (Crated) $10.50

Wood Cones for Finishing Vulcanite Plates.



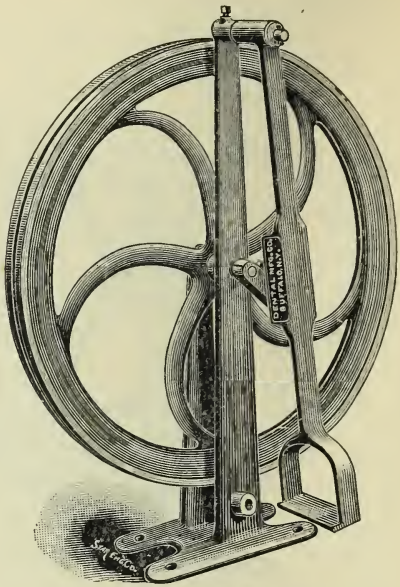
1 2 3

These Cones are made of soft wood coated with corundum, coarse and fine grits. They are intended to screw on the taper-end of a lathe-spindle or on a taper-chuck. The illustrations are full size.

Price of 1 dozen Cones, assorted..per doz. $0.25

Driving Wheels.

Buffalo Driving Wheel No. 70.



This wheel is made from new patterns, and is of the class of wheels that can be used either by fastening to the floor or by hanging under the bench, the change being made by reversing the treadle lever and then reversing the frame.

The wheel itself weighs 40 lbs., is 20½ inches in diameter, has a grooved flat rim on which either a round or flat belt can be used. Total weight of wheel and frame, 59 lbs. Height of frame, 25 inches.

This wheel is well made and runs true. The crank has a friction roller which runs in the treadle arm, thereby reducing the friction to a minimum. Taking altogether, it is the

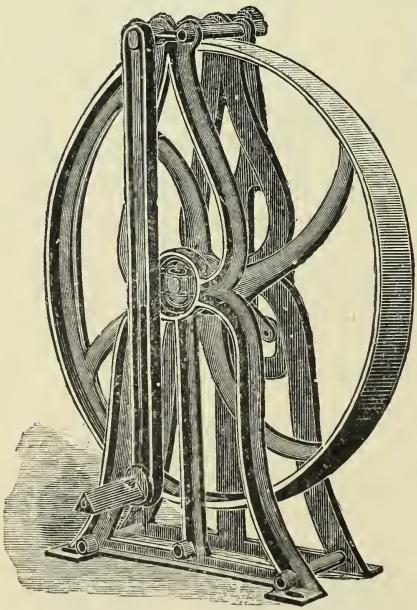
CHEAPEST FIRST-CLASS WHEEL

ever offered, and it is guaranteed to be as above represented.

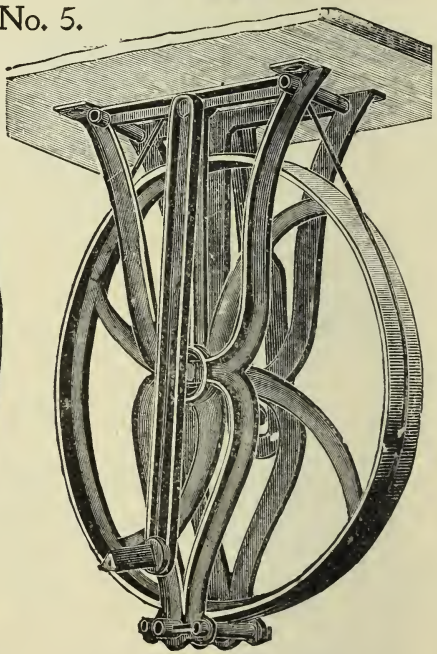
PRICE.

Buffalo Driving Wheel No. 70.....$8.00

Driving Wheel No. 5.



NO. 5. SWING TREADLE. STANDING.



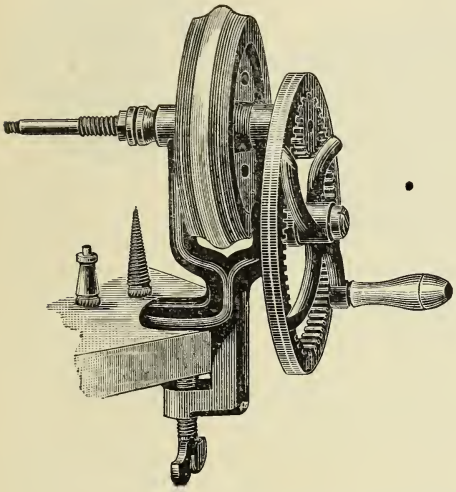
NO. 5. SWING TREADLE. HANGING.

This wheel may be used either hanging under the bench, or fastened to the floor, the frame being so made that it can be fitted up so as to swing the treadle lever either way. The wheel is operated by a swinging movement of the foot, which is much less tiresome than the heel and toe motion generally used. The wheel can be furnished with either a flat or round rim, with or without groove, for round belt. The crank runs in a slot in the lever, a rawhide roller being interposed. The diameter of wheel, twenty inches; weight twenty-five pounds; total weight, fifty pounds.

PRICE.

Driving Wheel No. 5.....$9.00

Skeleton Hand Lathe.

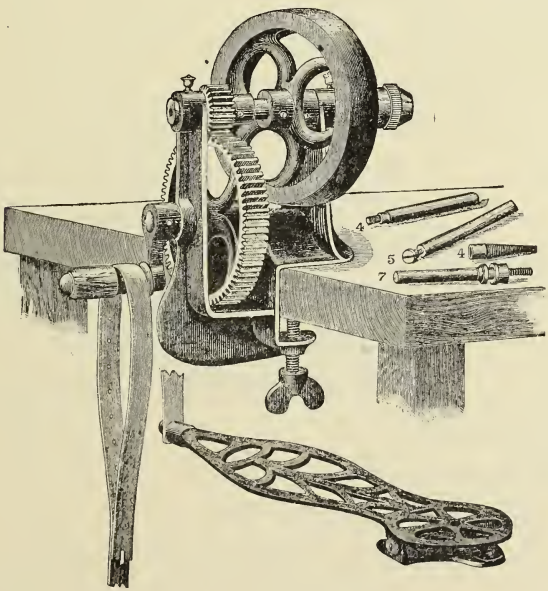


A very effective and desirable form of cheap grinding apparatus. The spindle carries a heavy fly-wheel, which gives the apparatus strength and steadiness of motion. The price includes one chuck for brushes, ane one for a small carborundum wheel, which screw on the end of the spindle. A large carborundum wheel is carried between the parting nuts on the spindle.

PRICES.

Skeleton Lathe $4.50
Extra Chucks, each..... .25

Cone-Journal Hand and Foot-Lathe.



Price $7.00

Lathe Tables.

Iron frame, wooden top, 26x20. This table is strongly built and weighs 85 pounds.

Price, each $10.00
Boxing 1.00

LOOK FOR OUR TRADE MARK.

FRED. C. STEIMANN & CO.

Manufacturers and Importers,

102-104 Fulton Street, NEW YORK.

OUR GOODS SOLD AT RETAIL BY ALL DENTAL DEPOTS.
WE SELL AT WHOLESALE ONLY.

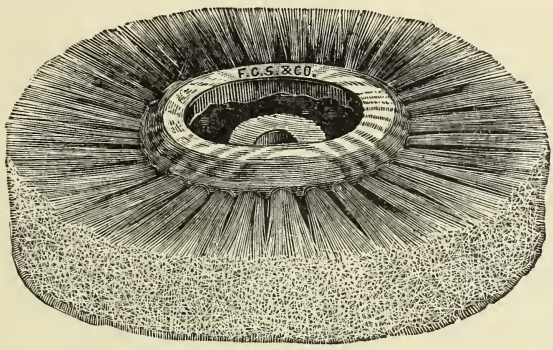
SPECIALTIES:

Felt Polishing Wheels,
Felt Polishing Cones,
Bristle Brush Wheels,
Tooth Polishing Brushes,
Steel and Brass Wire Wheels,
Moose Hide and Leather Buffs,
Vulcanite Files,
Gold Plate Files,
Crown and Collar Shears,
Plate Shears, Foil Scissors,
Damascus Calipers,
Damascus Charcoal Blocks,
Damascus Crown Dies,
Damascus Plyers and Nippers,
Damascus Lathes, Screw Plates, Etc.

COLLEGE GOODS AND
LABORATORY SUPPLIES.

Wood-Center Brush Wheels.

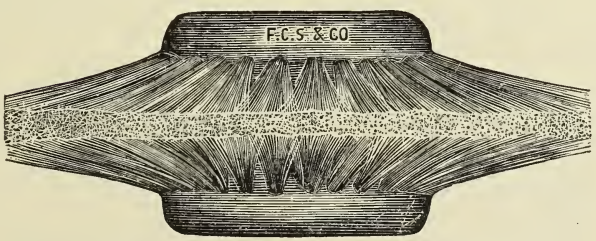
Straight Bristles.



Cut represents No. 26.

No.	Rows.	Bristles.	Diameter.	Each.
3	1	Stiff	1¾ in.	$0 10
4	1	"	1⅞ "	14
2	2	"	1½ "	15
6	2	Medium	1¾ "	18
9	2	Stiff	1¾ "	
10	2	Soft	1¾ "	
14	2	"	1⅞ "	20
19	2	"	2½ "	25
60	2	"	3¼ "	40
55	2	Stiff	3½ "	45
56	2	Soft	3½ "	
17	3	Stiff	2 "	28
18	3	Soft	2 "	
25	3	Stiff	2¾ in.	$0 34
26	3	Soft	2¾ "	
50	3	"	3 "	37
34	3	"	3½ "	50
42	3	"	3¾ "	70
29	4	Stiff	3 "	44
30	4	Soft	3 "	
37	4	Stiff	3½ "	62
38	4	Soft	3½ "	
45	4	Stiff	3¾ "	72
46	4	Soft	3¾ "	
63	6	Stiff	3 "	65
64	6	Soft	3 "	

Converging Bristles.

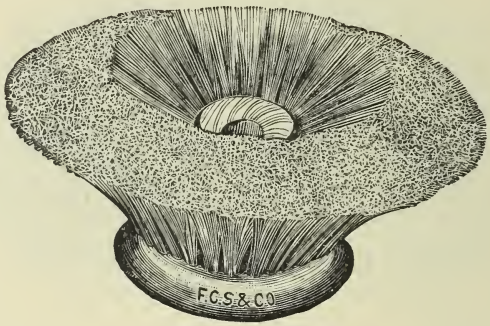


Cut represents No. 27.

No.	Rows.	Bristles.	Diameter,	Each.
1	2	Stiff	1½ in	$0 15
5	2	"	1¾ "	
7	2	Soft	1¾ "	18
8	2	Medium	1¾ "	
11	2	Soft	1⅞ "	
12	2	Stiff	1⅞ "	20
13	2	Medium	1⅞ "	
20	2	Stiff	2½ "	
21	2	Medium	2½ "	25
22	2	Soft	2½ "	
57	2	"	3¼ "	
58	2	Stiff	3¼ "	40
59	2	Medium	3¼ "	
53	2	Stiff	3½ "	
54	2	Medium	3½ "	45
15	3	Stiff	2 "	
16	3	Medium	2 "	28
23	3	Stiff	2¾ "	
24	3	Medium	2¾ "	34
47	3	Soft	3 in.	
48	3	Stiff	3 "	$0 37
49	3	Medium	3 "	
31	3	Soft	3½ "	
32	3	Stiff	3½ "	50
33	3	Medium	3½ "	
39	3	Soft	3¾ "	
40	3	Stiff	3¾ "	70
41	3	Medium	3¾ "	
27	4	Stiff	3 "	
28	4	Medium	3 "	44
35	4	Stiff	3½ "	
36	4	Medium	3½ "	62
43	4	Stiff	3¾ "	
44	4	Medium	3¾ "	72
61	6	Stiff	3 "	
62	6	Medium	3 "	65

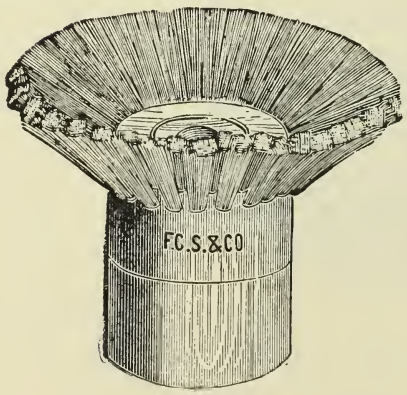
Wood-Center Brush Wheels.—Continued.

Cup-Shape.

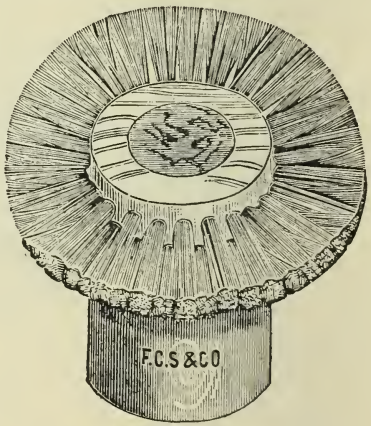


Cut represents No. 76.

No. 67.	1 Row, Medium Bristles, 2 inches diameter	each	$0.14
No. 68.	1 Row, Stiff Bristles, 2 inches diameter	"	.15
No. 76.	3 Rows, Soft Bristles, 2½ inches diameter	"	.30
No. 78.	3 Rows, Medium Bristles, 2½ inches diameter	"	
No. 77.	3 Rows, Stiff Bristles, 2½ inches diameter	"	
No. 69.	3 Rows, Soft Bristles, 3 inches diameter	"	.34
No. 71.	3 Rows, Medium Bristles, 3 inches diameter	"	
No. 70.	3 Rows, Stiff Bristles, 3 inches diameter	"	



No. 65.



No. 66.

Cup-Shape Bristles, Long Wooden Shanks.

Style of No. 65.

No. 51.	2 Rows, Stiff Bristles, 1¾ inches diameter	each	$0.18
No. 65.	2 Rows, Stiff Bristles, 1⅞ inches diameter	each	.24

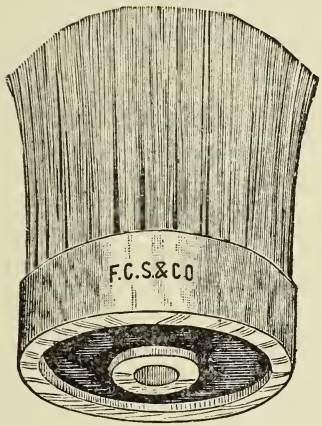
Straight Bristles, Long Wooden Shanks.

Style of No. 66.

No. 52.	2 Rows, Stiff Bristles, 1⅛ inches diameter	each	$0.18
No. 66.	2 Rows, Stiff Bristles, 1⅞ inches diameter	each	.24

Wood-Center Brush Wheels.—Continued.

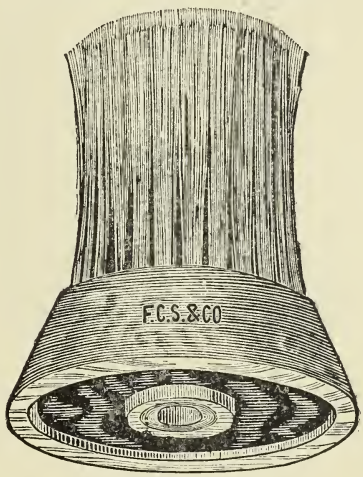
Hub-Shape.



Cut represents No. 73.

No.		Each.
75.	Ring Polisher, $\frac{1}{2}$ in. diam...	$0.08
74.	Soft Bristles, $1\frac{1}{2}$ in. diam.	.32
72.	Med. Bristles, $1\frac{1}{2}$ in. diam.	
73.	Stiff Bristles, $1\frac{1}{2}$ in. diam	

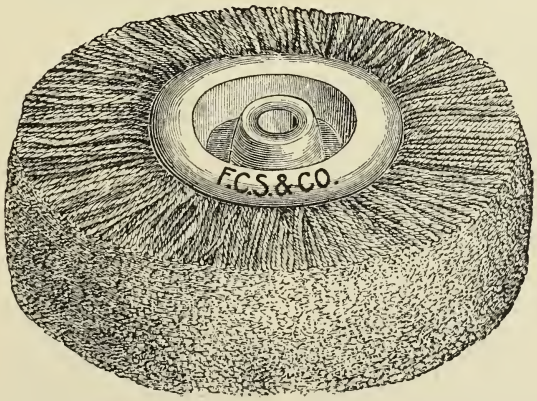
Hub-Shape. Covering Bristles.



Cut represents No. 87.

No.		Each.
85.	Stiff Bristles, $\frac{3}{4}$ in. diam...	$0.18
86.	Stiff Bristles, 1 in. diam...	.22
87.	Stiff Bristles, $1\frac{1}{8}$ in. diam...	.30

Wood-Center Cotton Wheels.

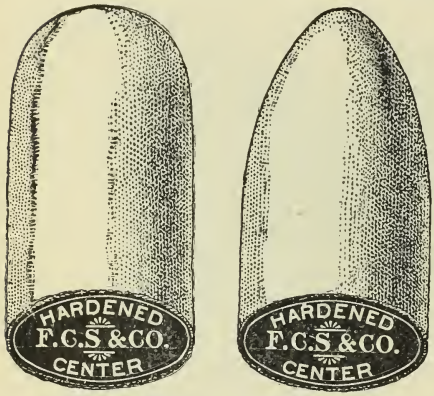


Cut represents No. 83.

No. 79.	1 Row, $1\frac{3}{4}$ inches diameter	each	$0.12
No. 80.	2 Rows, $1\frac{3}{4}$ inches diameter	"	.20
No. 81.	2 Rows, 2 inches diameter	"	
No. 82.	2 Rows, $2\frac{3}{4}$ inches diameter	"	.24
No. 83.	3 Rows, $2\frac{3}{4}$ inches diameter	"	.34
No. 84.	4 Rows, 3 inches diameter	"	.40

Felt Cones and Wheels.

Hardened Centers.

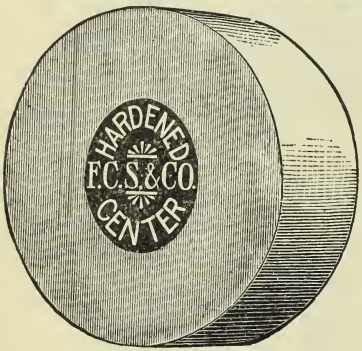


Made of stock selected with a view to its special fitness for polishing: flexible, dense, and withal soft—but not spongy.

Cones—Blunt and Pointed.

PRICES.

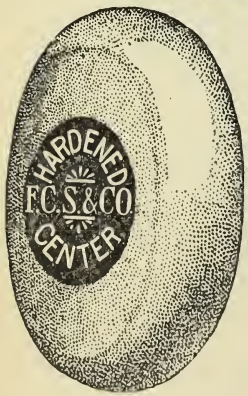
Large Felt Cone, 1 inch in diameter, Blunt or Pointed, each.....$0.20
Small Felt Cone, ¾ inch in diameter, Blunt or Pointed, each..... .10
Very Small Felt Cone, ½ inch in diameter, Blunt (per doz. $0.75) ....each .07



Wheels—Square Edge.

PRICES.

Square-Edge No. 0, ⅞ in. diameter..each $0.10
Square-Edge No. 1, 1⅛ in. diameter..each .15
Square-Edge No. 2, 1⅝ in. diameter..each .15
Square-Edge No. 3, 2¼ in. diameter..each .25
Square-Edge No. 4, 2½ in. diameter..each .25



Wheels—Round Edge.

Round-Edge No. 1, 1½ inches diameter.....each $0.15
Round-Edge No. 2, 1¾ inches diameter.....each .15
Round-Edge No. 3, 2¼ inches diameter.....each .25
Round-Edge No. 4, 2½ inches diameter.....each .25

Abrada.

Abrada is put up in oval sticks, 4x1¼x¾ inches, each stick in a separate box, neatly labeled.

No. 1, Fine, for Polishing Vulcanite.
No. 2, Medium for Grinding Vulcanite.
No. 3, Fine, for Polishing Metals.
No. 4, Medium, for Grinding Metals.

PRICES.

Nos. 1 and 2.....each $0.15
Nos. 3 and 4.....each .25
In box of four..... .70

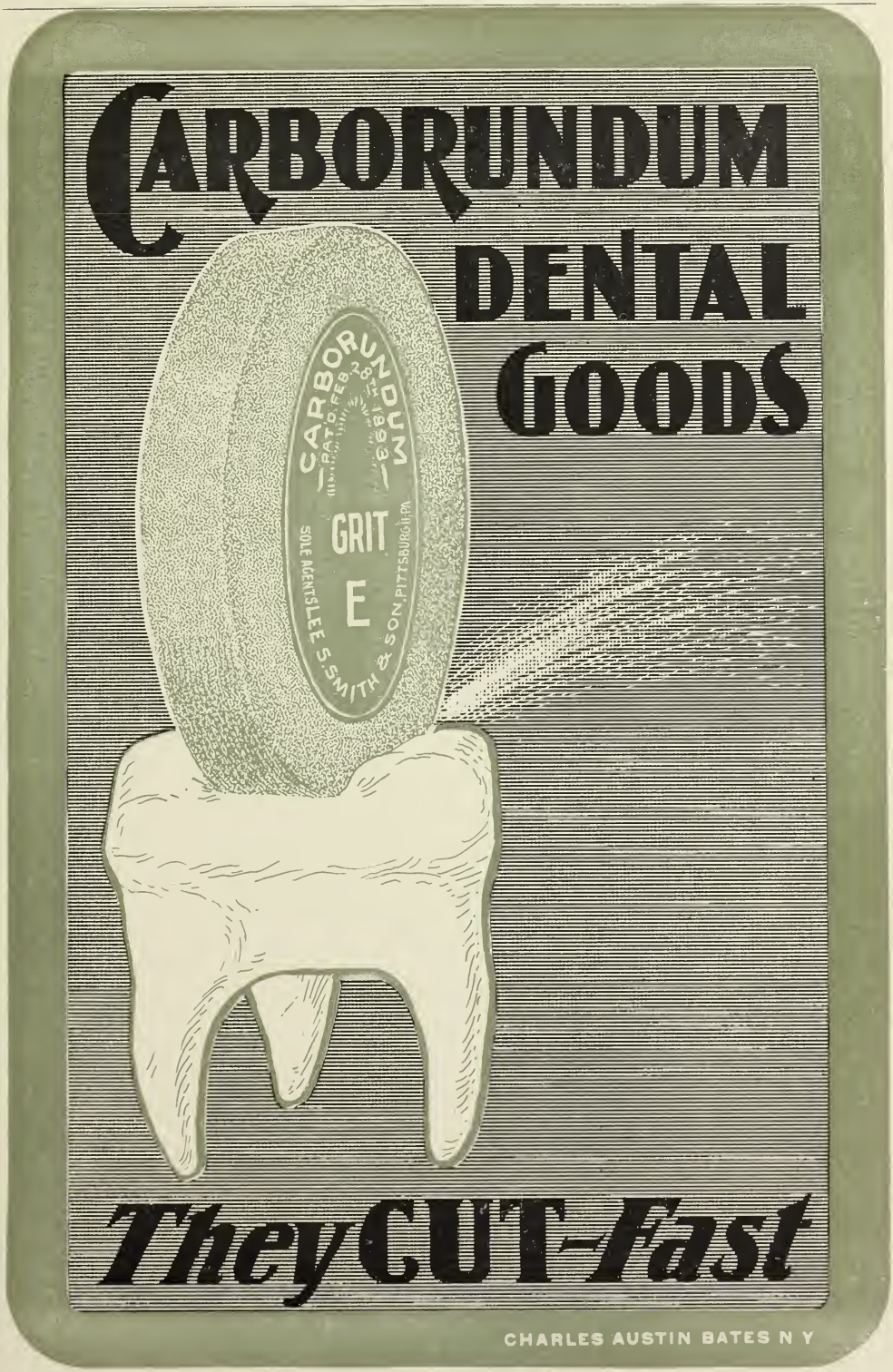
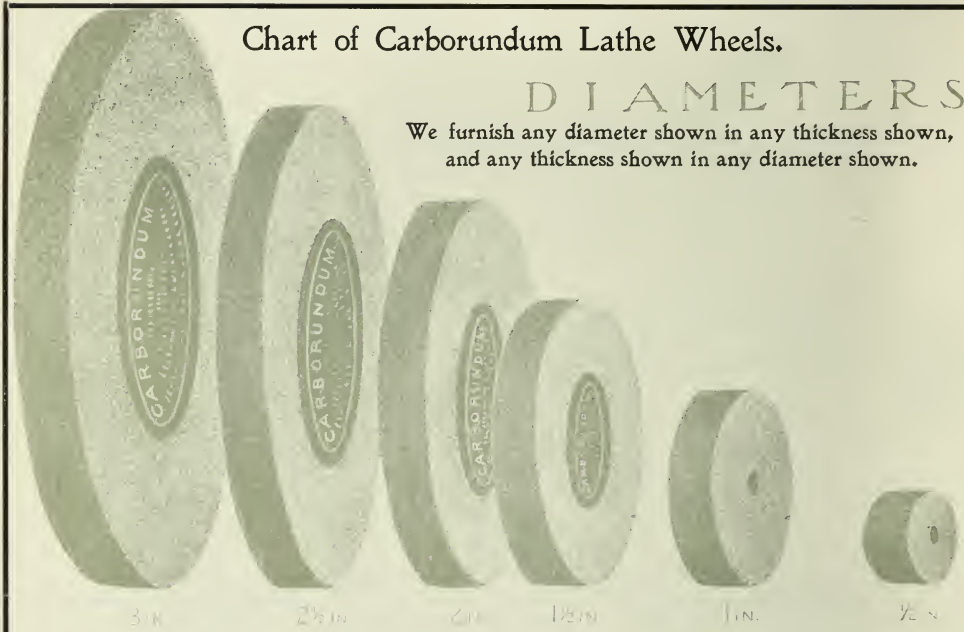

CARBORUNDUM
DENTAL
GOODS
CARBORUNDUM
PAT. FEB. 18TH 1896
GRIT
E
SOLE AGENTS LEE S. SMITH & SON PITTSBURGH PA
They CUT-Fast
CHARLES AUSTIN BATES N Y

Chart of Carborundum Lathe Wheels.

DIAMETERS

We furnish any diameter shown in any thickness shown, and any thickness shown in any diameter shown.



THICKNESS

See prices of all sizes on page 552.

CARBORUNDUM DENTAL LATHE WHEELS.

Patented February 28, 1893.

A Carborundum lathe wheel will cut porcelain faster than any other wheel on earth.

It will actually and positively cut four times as fast as a corundum wheel.

Expert chemists say Carborundum is as much harder than corundum as corundum is harder than talc or soapstone. These same authorities place Carborundum next to the diamond in the scale of hardness. They say it is a close second.

A genuine Carborundum wheel is vitrified. Before it is vitrified it is subjected to an enormous pressure. After it is pressed it is baked in a potter's kiln for seven days at a temperature of 2500 degrees.

There are two good results of this process.

The first result is the production of a wheel that is absolutely uniform in texture.

The second result is the production of a wheel that may be used dry just as well as wet. It will do just as good work one way as the other.

There are imitations of these wheels, but it is just as easy to tell them from the genuine before buying as after using.

If this label isn't pasted on the wheel is simply isn't a genuine Carborundum wheel. If it isn't genuine it isn't as good.

Every Carborundum wheel bearing our name is sold under this guarantee.

WARRANT.

Carborundum Wheels are guaranteed to be free from soft spots, to cut equally well, wet or dry, to cut from two to four times as fast as Corundum, according to grit, and not to glaze or wear smooth.

LEE S. SMITH & SON,
SOLE AGENTS,
PITTSBURG, PA.

There are not many words in that guarantee, but every one of them counts. Every one of them means exactly what it says. See prices on page 552.

Carborundum Dental Lathe Wheels

AT REDUCED PRICES.

The prices of Carborundum Lathe Wheels were reduced 33 1-3 per cent. in July 1900, to the following list.

The decreased cost means simply increased production.

In the genuine Carborundum goods it can never by any possible chance mean inferior quality. The quality of the wheel is constantly improving. It is as near perfect as money and brains can make it.

SQUARE EDGE.

No.	Inches. Diameter.	Thickness.	Center Hole.	Price in Cents.	No.	Inches. Diameter.	Thickness.	Center Hole.	Price in Cents.	No.	Inches. Diameter.	Thickness.	Center Hole.	Price in Cents.
1	½	1/16	3/32	12	9	1½	⅜	¼	25	17	2½	⅜	5/16	35
2	½	⅛	3/32	12	10	1½	½	¼	26	18	2½	½	5/16	40
3	½	3/16	3/32	14	11	2	⅛	¼	25	19	3	⅛	⅜	35
4	1	⅛	3/16	17	12	2	¼	¼	27	20	3	¼	⅜	35
5	1	¼	3/16	18	13	2	⅜	¼	30	21	3	⅜	⅜	40
6	1	⅜	3/16	18	14	2	½	¼	35	22	3	½	⅜	47
7	1½	⅛	¼	20	15	2½	⅛	5/16	27	23	3	¾	⅜	60
8	1½	¼	¼	22	16	2½	¼	5/16	27					

ROUND EDGE.

30	½	1/16	3/32	14	37	1½	¼	¼	25	44	2½	⅜	5/16	37
31	½	⅛	3/32	14	38	1½	⅜	¼	27	45	3	⅛	13/32	37
32	½	3/16	3/32	17	39	2	⅛	¼	27	46	3	¼	13/32	37
33	1	⅛	5/32	20	40	2	¼	¼	30	47	3	⅜	13/32	44
34	1	¼	5/32	20	41	2	⅜	¼	35	50	1¼	Thin Thick	Edge Cent'r	25
35	1	⅜	5/32	22	42	2½	⅛	5/16	30					
36	1½	⅛	¼	25	43	2½	¼	5/16	30	51	3	"	"	40

FIVE GRITS, A, B, C, D, & E. COARSE TO FINE.

SOLE AGENTS:

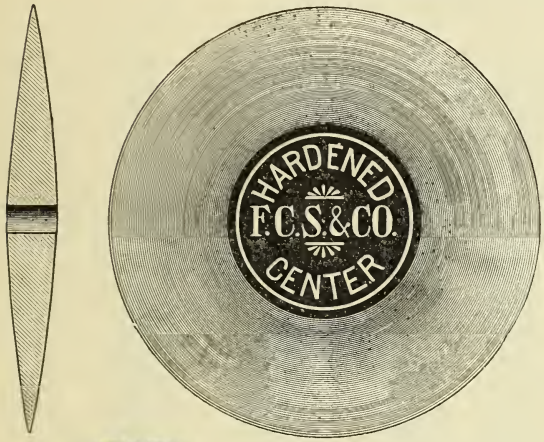
LEE S. SMITH & SON,

DENTAL DEPOT,

The Carborundum Co., Mfrs.,
Niagara Falls, N. Y.

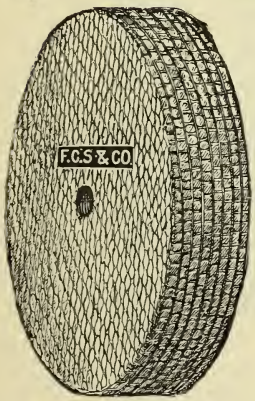
524 Penn Avenue, Pittsburg, Pa.

Felt Wheels.—Continued.



PRICES.

Knife-Edge, No. 1, 1½ inches diameter . . . each	$0.15
Knife-Edge, No. 2, 1¾ inches diameter . . . each	.15
Knife-Edge, No. 3, 2¼ inches diameter . . . each	.25
Knife-Edge, No. 4, 2½ inches diameter . . . each	.25



Cotton-Duck Wheels and Cones.

Suggested by Dr. J. H. Mease.

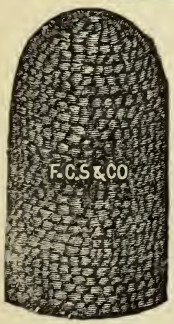
Cotton-Duck Wheels and Cones hold the coarser abrasives better than anything we know of.

As time-savers in cutting down a plate preliminary to the application of fine finishers they are unequaled.

PRICES.

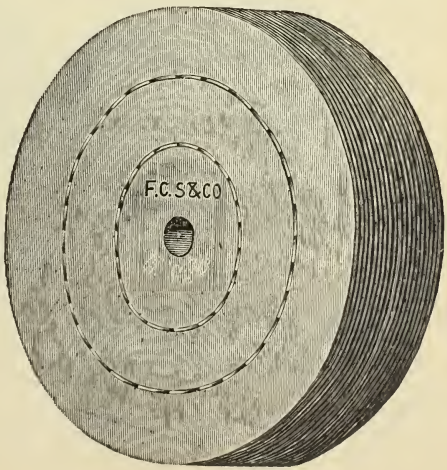
Wheels, No. 1, 1⅛ in. diameter . . . . . each	$0.10
Wheels, No. 2, 1⅝ in. diameter . . . . . each	.20
Wheels, No. 3, 2¼ in. diameter . . . . . each	.30
Wheels, No. 4, 2½ in. diameter . . . . . each	.40

Cones.



PRICES.

Large Cones, 2 inches long, 1 inch diameter . . . . . each	$0.40
Small Cones, 1⅜ inches long, 1 inch diameter . . . . . each	.20
Extra Small	.10

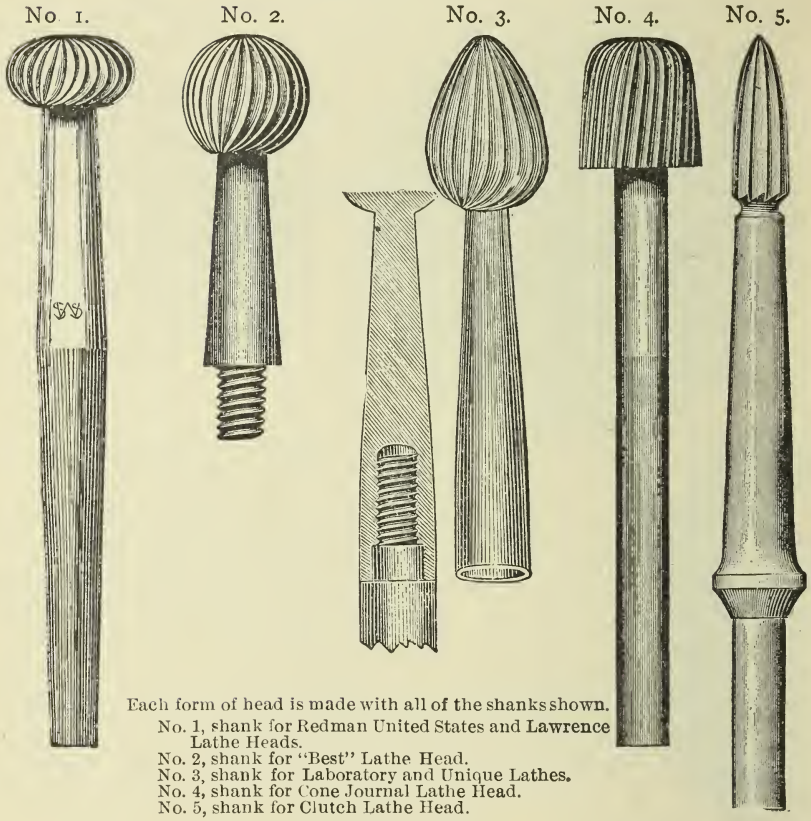


Chamois-Skin Polishing Wheels.

PRICES.

3 inches in diameter	$0.40
2½ inches in diameter	.35
2 inches in diameter	.25

Vulcanite Burs.

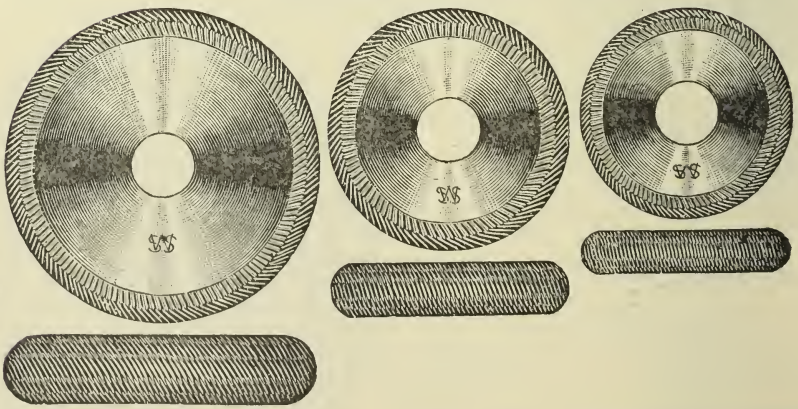


Each form of head is made with all of the shanks shown.
No. 1, shank for Redman United States and Lawrence Lathe Heads.
No. 2, shank for "Best" Lathe Head.
No. 3, shank for Laboratory and Unique Lathes.
No. 4, shank for Cone Journal Lathe Head.
No. 5, shank for Clutch Lathe Head.

PRICES.

Burs Nos. 1, 2, 3, 4, 5, for Clutch Lathe Head.....each $1.50
Burs Nos. 1, 2, 3, 4, 5 for other Lathe Heads named... " 1.25

Circular Steel Files.

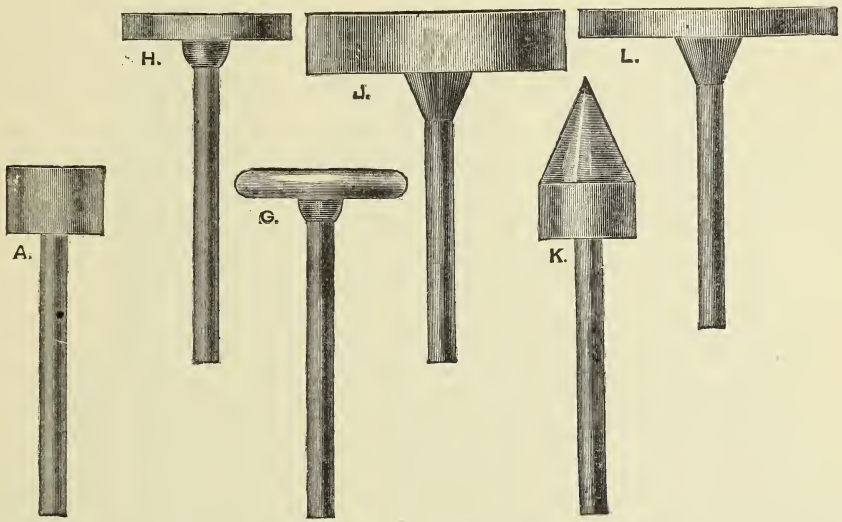


In cutting down the rough surface of a vulcanite plate, they combine the efficiency of a file with the rapid work of a lathe.

Diameter, width, and cut as shown. Size of hole 5-16-inch diameter.

Price .....each $1.25

Ready-Mounted Corundum Wheels.

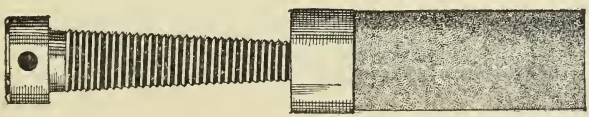


These wheels are intended for use with the Niagara Lathe. They are moulded upon pin-chucks, and can be used until completely worn out. They are the most convenient form of small wheel, as they can be used clear beyond the point when ordinary wheels become useless. The facility with which some little depression is reached with one of these wheels, when worn down to a very small diameter, is only appreciated by those who have used them. A single trial will convince any one of their value. The illustrations show them full size.

PRICES.

Ready-Mounted Corundum Wheels, sizes A, G, H or K, each..... 15 cents.
Ready-Mounted Corundum Wheels, size L, each..... 20 cents.
Ready-Mounted Corundum Wheels, size J, each..... 30 cents.

The Austin Flexible Rubber Plate Finisher.



Consists of a flexible rubber carrier, mounted upon a split chuck, and carrying emery paper or emery cloth secured by a brass collar or ferrule. When the Fnisher is screwed on the taper screw chuck or taper spindle of a lathe, the flexible carrier is expanded to securely hold the paper or cloth between the brass collar and the carrier.

PRICES.

Austin's Flexible Rubber Plate Fnisher, including a supply of paper and cloth, $ .50
Extra Emery Paper, per package..... .10
Extra Emery Cloth, per package..... .10

Corundum Wheels.

No.	Diameter.	Thickness in inches.					
		¼	⅜	½	⅝	¾	1
00	¾ in.	$0.05					
0	⅞ "	.05					
1	1 "	.05	$0.08	$0.12	$0.14	$0.16	$0.20
2	1⅛ "						
3	1⅝ "	.12	.14	.16	.18	.20	.24
4	1¾ "						
5	2⅛ "						
6	2½ "	.18	.25	.30	.35	.40	.50
7	3⅛ "	.30	.40	.50	.60	.70	.80

The ¼-in. Wheels Nos. 0 to 7 are made both round and square edge. All others square edge only.

Articulating, diameter 2⅜ in., thickness of cutting edge $\frac{1}{16}$ in.....each $0.15
Depressed Center, diameter 3⅛ in..... " .40

Three Grits, B, C and D—fine, medium and coarse.

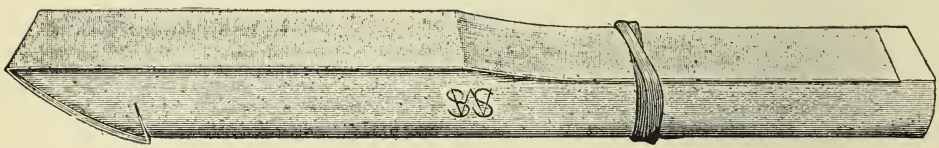
Gem Wheels for Lathe.

PRICES.

No.	Diameter.	Thickness ¼ in. and less.
00	¾ in.	
0	⅞ "	.....each $0.10
1	1 "	
2	1⅛ "	
3	1⅝ "	..... " .20
4	1¾ "	
5	2⅛ "	
6	2½ "	..... " .40
7	3⅛ "	..... " .50
Articulating		..... " .30

Grits, fine and extra fine.

Finishing Strips and Carrier.



For finishing vulcanite and celluloid plates.

This appliance gives the dentist three advantageous working surfaces of different shapes—the rounded slanting end, the sharp edge, and long flat face. The strips are put up 50 in a box, sand and emery-paper.

Price, complete, Carrier and box of finishing strips.....$0.12
" Carrier separately..... .03
" Strips separately, per box..... .10

Flexible Steel Scratch Brush.

A flexible steel wire Brush for the removal of silex and very small globules of rubber from the palatine surfaces of rubber plates.

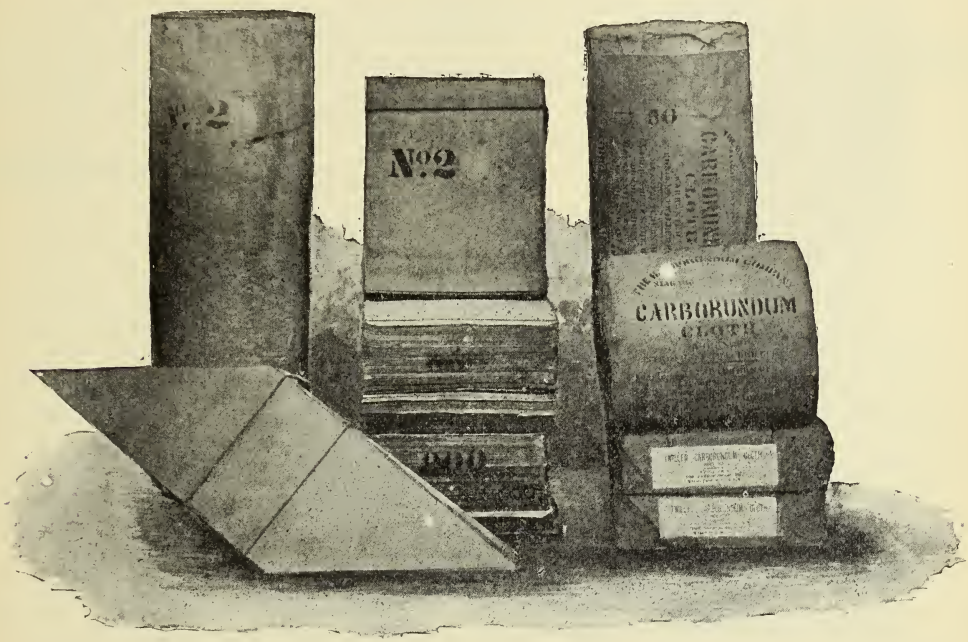
Price.....$0.25

Hinman's Polishing-Strip Chucks.

This device consists of a slotted wood chuck, with the portion which carries the Polishing Strips covered with felt to give the proper surface. One end of the strip is tucked into the slot, where it is held firmly by a wooden pin. The Polishing Strip Chucks can be used on any lathe with a screw mandrel, and will be found useful in polishing vulcanite plates, etc. Three sizes.

Price, No. 1..... $0.20
" 2 and 3..... .25
100 Emery Paper Strips for No. 1 chuck..... .20
100 " " " " 2 " ..... .25
100 " " " " 3 " ..... .30

Carborundum Cloth and Paper for Laboratory use.



Carborundum Cloth and Paper is better than any other kind of cloth and paper for laboratory work. It cuts faster and cleaner than anything else. Both cloth and paper are furnished in three grits, coarse, medium and fine, in sheets 11x12 inches.

Carborundum Cloth, per sheet.....$0.05; per doz. $0.50
Carborundum Paper, for 2 sheets..... .05; per doz. .25

Lee S. Smith & Son, Sole Agents, Pittsburg, Pa.

Sand, Emery, Cuttle-Fish and Garnet Paper. Emery and Crocus Cloths.

Sand-Paper, Nos. oo to 1½.	per quire	$0.25	Garnet Paper	per quire	.50
Sand-Paper, Nos. 2, 2½, 3..	"	.30	Emery-Cloth, Nos. oo to 1½.	"	.90
Emery-Paper, Nos. oo to 1½	"	.35	Emery-Cloth, No. 2.....	"	1.00
Emery-Paper, No. 2.....	"	.40	Emery-Cloth, No. 2½.....	"	1.25
Emery-Paper, No. 2½.....	"	.50	Emery-Cloth, No. 3.....	"	1.35
Emery-Paper, No. 3.....	"	.60	Crocus-Cloth	"	.90
Cuttle-Fish Paper	"	.50			

Reamer.

For Fitting Wheels having Wood Centers to Taper-Screw Chucks.

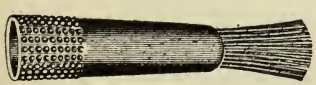
This is a simple, inexpensive, and efficient tool which will prove useful in every laboratory.

In shape and size it corresponds to the No. 4 taper-screw chuck, and to the taper-screw end of the lathe-spindle.

It is designed to cut rapidly and accurately, and may be used a long time without requiring to be sharpened.

Price..... ....each $0.75

Dental-Plate Brushes.



These little Brushes are fixed in a soft metal socket, adapted to a taper-screw lathe-chuck.

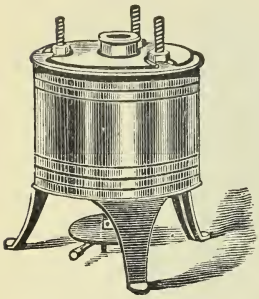
They will be found very efficient in reaching those parts of the plate that will not permit the use of the brush wheel.

Put up in boxes containing 10 each.

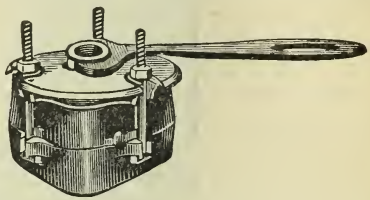
Price ....per box $1.00

The Brown Celluloid Apparatus.

Dry Heat.



Malleable Iron Flasks and Wrenches. This apparatus is recommended as excellent for moulding celluloid plates by the "Dry Heat" process, a short explanation of which will be found below. (See note). It will be found a very convenient appliance, and capable of turning out work equal to some much higher priced machines.



Brown's flask is now sent out with the apparatus, by which the difficulty heretofore experienced in removing the plaster is entirely overcome. The flask has a loose bottom, resting on a flange; by rapping on this loose bottom, the plaster is removed entire. This feature will be readily appreciated by those who have used dry heat in working celluloid.

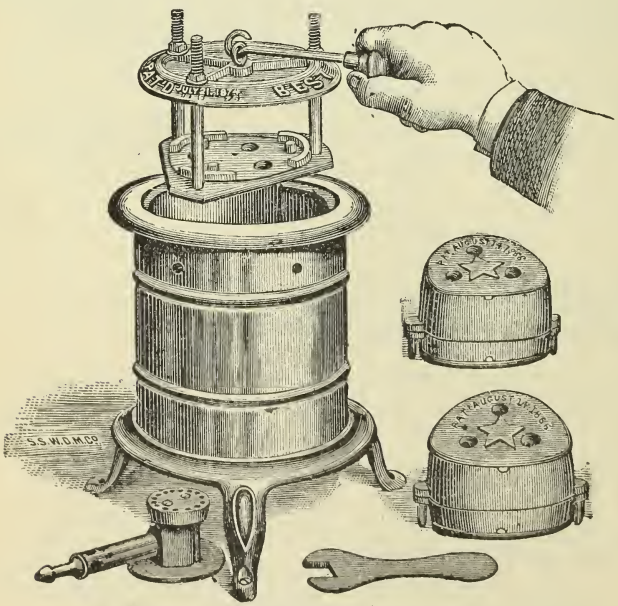
NOTE.—The preferable method of moulding celluloid in the Brown apparatus, is first to put the flask into the apparatus, when ready for moulding the plate, and thoroughly dry the plaster. Then remove it, insert the celluloid blank, replace the flask in the apparatus as quickly as possible, and immediately begin to close the flask. Only enough heat will be required during this part of the operation to retain the flask at the temperature it already has.

The absence of moisture in the plaster has the effect of rendering the celluloid harder and more dense in texture, and it is believed that plates moulded in this manner are less apt to warp, than when moulded in wet plaster.

PRICES.

Brown Celluloid Apparatus, complete, including one Flask, large and small Wrench, for Gas, Alcohol or Kerosene.....$6.00

The "Best" Hot Moist Air Celluloid Apparatus.



FOR GAS.

The inside chamber is of cast iron, surrounded by a sheet-iron casing. The lid, of cast iron, forming a part of the clamp, is pierced for the passage of three wrought-iron screw-bolts—nuts being on the upper side and easy of access

PRICES.

For Gas, with No. 13 Burner as shown....	$11.00
For Alcohol, with Lamp No. 10	11.00
Iron Flasks, separately, each	1.00
Brass Flasks, separately, each	2.00

Steam Celluloid Apparatus.

Apparatus complete ..	$16.00
Complete with Gas Burner No. 13.....	17.00
Flasks for Steam Apparatus, Malleable Iron, Galvanized	1.50
Packing for Boiler of Steam Apparatus, per strip	.2[illegible]
Packing for Gland of Steam Apparatus, per strip	.20

The Gartrell Steam Gauge and Gas Regulator.

Price..... ....each $10.00

The Lewis Cross-Bar Vulcanizer.

Patented October 2, 1894.

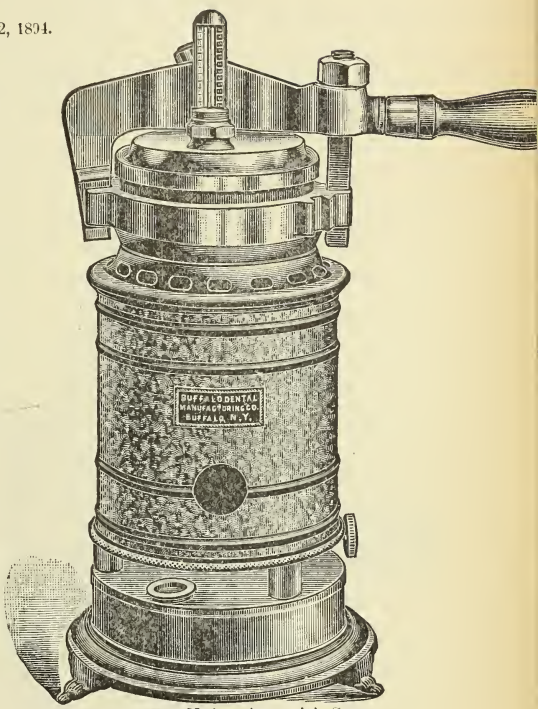
This Vulcanizer is entirely new in its essential parts, and embodies improvements suggested by many years of experience, both in handling and in manufacturing, and we have no hesitation in recommending it as the strongest, safest, most reliable and convenient Vulcanizer of the cross bar pattern on the market.

The pot is hand-made from copper rolled expressly for our Vulcanizers, is of unusual thickness, and is warranted to be perfect.

The cap resembles that used on the B. D. M. Co.'s Cross-Bar Vulcanizer, but is much thicker and heavier; besides, being ribbed on the underside to resist any strain that may be put upon it. This Cap has but two holes drilled in it; one for the mercury bath, to which the thermometer is attached; the other for the insertion of the Lewis manifolt, which carries the safety valve, blow-off, gas regulator or steam gauge.

The ring that surrounds the pot is malleable iron and is of ample strength. Besides the lugs for taking the strain of the cross-bar and bolt, it has a dove-tailed projection for the insertion of a lifting handle. It will be observed that when the cross-bar and cap are removed, there are no swinging bolts or attachments to the pot.

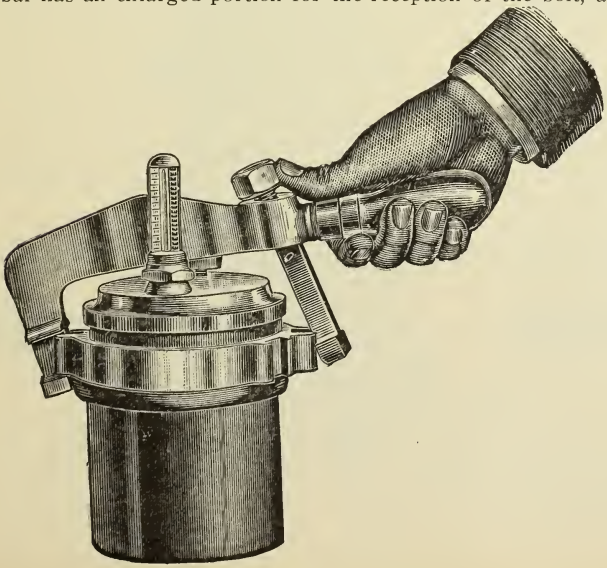
The Cross-Bar is of an improved form, and is made of malleable iron. One end is at right angles to the main bar and terminated by projections that catch under the lugs on the ring. Over the projections is a small rib which prevents the bar from dropping out of position, these two projections, in fact, forming a hinge-guide. The other end of the cross bar has an enlarged portion for the reception of the bolt, and is terminated by a handle.



Lewis Cross-Bar Vulcanizer with Gas Heating Apparatus.

No. 21. Cross-Bar wrench.

No. 20. Pot Lifter.



The Lewis Vulcanizer is closed by one bolt suspended in a slot on the hand-end of the Cross-bar. The bolt is squared to prevent rotation, and is surrounded by a spring for the purpose of disengaging it from the lugs when the nut is slacked off, and for always retaining the bolt perpendicularly, and forcing it in place automatically. It is not necessary to adjust the bolt in the lug, as the action of adjusting the cross-bar causes the bolt to assume its proper position.

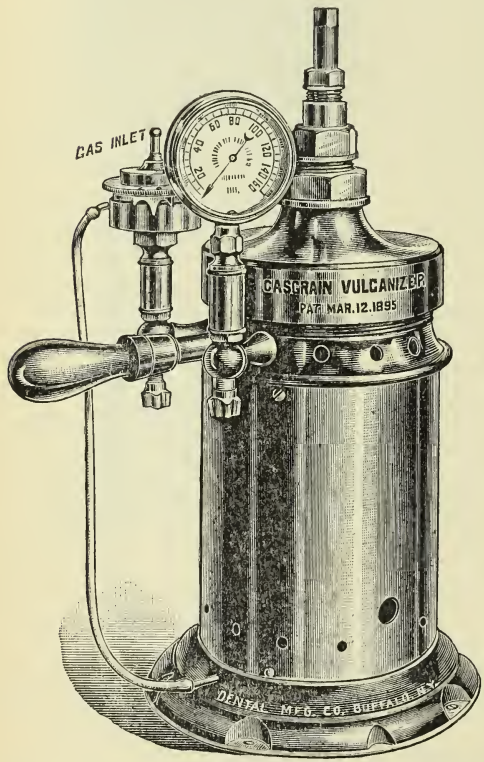
Made in two sizes, 4-inch and 4½-inch diameter.

	4-in.	4½-in.
No. 1, complete..	$14.00	$16.00
No. 2, complete..	16.00	18.00
No. 3, complete..	18.00	20.00

The Casgrain Flask-Closing Vulcanizer

Patented in U. S., March 12, 1895; in Canada, March 18, 1895.

This vulcanizer is the invention of Dr. Edmond H. Casgrain, of Quebec, Canada, and is of the class known as flask-closing vulcanizers.



This vulcanizer possesses great strength, and is constructed in such a way that it is easily and quickly closed and made steam-tight, and the flasks compressed with the utmost facility. As sent out, it is provided with a steam gauge (a thermometer being entirely useless), a blow-off and safety apparatus. Provision is also made for the attachment of the Lewis Graduated Gas Regulator when required, as shown in the illustration.

The steam gauge is mounted on an improved siphon, made of brass, polished and nickeled, thereby dispensing with the unsightly iron coil as commonly used.

The entire vulcanizer is made of brass—with the exception of the pot, which is copper—of the best possible workmanship, highly polished and nickel plated. The flasks are of special pattern, and adapted to this vulcanizer only.

Owing to the large amount of metal in this vulcanizer, it "heats up" slowly, which, however, is an absolute advantage when perfectly vulcanized results are desired. In our experiments we found that it took from 30 to 35 minutes to reach 320°, and that unusually thick pieces of rubber were vulcanized perfectly through the entire mass, and without porosity. This result was obtained in all of our experiments; the products from this vulcanizer being homogeneous, and with a toughness quite remarkable.

Flasks for the Casgrain Vulcanizer are designated No. 23, and should be ordered by number.

The Lewis Heating Apparatus is furnished with this vulcanizer when ordered for gas. The top ring and base are bolted to the steel jacket to prevent rotation, the base being provided with holes so that it can be securely screwed to the work bench.

Wrenches Used on Casgrain Vulcanizer.

No. 23. Casgrain Cap Wrench.

No. 24. Stem Wrench.

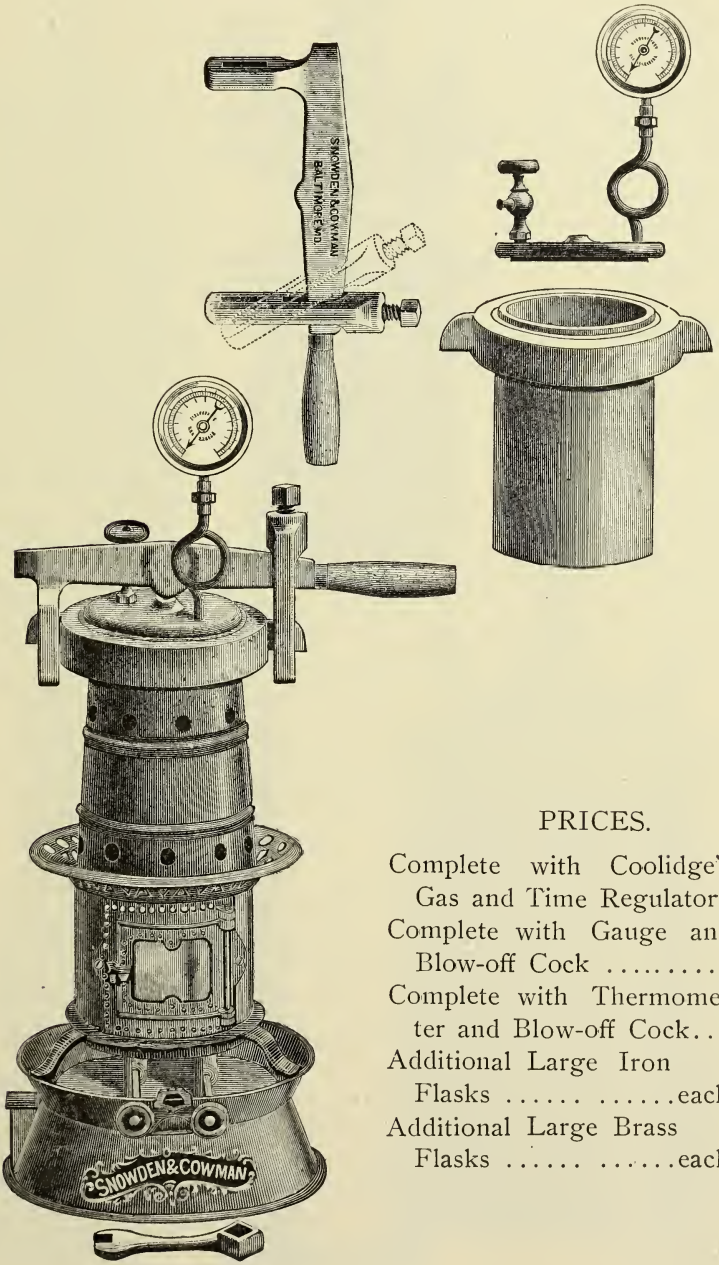
PRICES.

Casgrin Vulcanizer, complete with two flasks and steam gauge	$25.00
Lewis No. 4 Graduated Gas Regulator, with No. 2 Siphon, extra	5.00
No. 1 Time Regulator for above	4.00

Gas or kerosene heating apparatus, as desired.

S. & C. Vulcanizers.

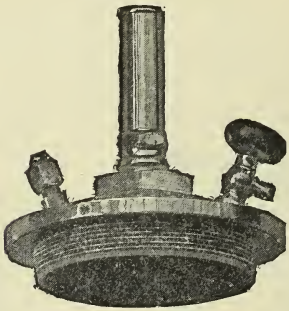
For Gas or Kerosene..

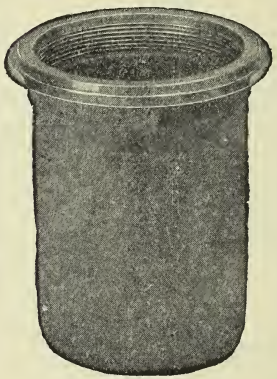


PRICES.

Complete with Coolidge's Gas and Time Regulator.	$25.00
Complete with Gauge and Blow-off Cock	21.00
Complete with Thermometer and Blow-off Cock..	18.00
Additional Large Iron Flasks ....each	.90
Additional Large Brass Flasks ....each	1.25

VULCANIZER.





OPEN.

This Vulcanizer is made of the best Bronze, so-called "Gun Metal," and is tested at one thousand pounds hydraulic pressure. It will hold three flasks of any kind with Donham spring, and allow plenty of room for handling.

This packing is moulded instead of being cut in strips, and will last for years without being renewed. The cover can be screwed steam tight without the use of a wrench, the same being necessary only to open after being heated. The small quantity of water used (one gill) produces Vulcanizing by steam instead of water, thus producing better results.

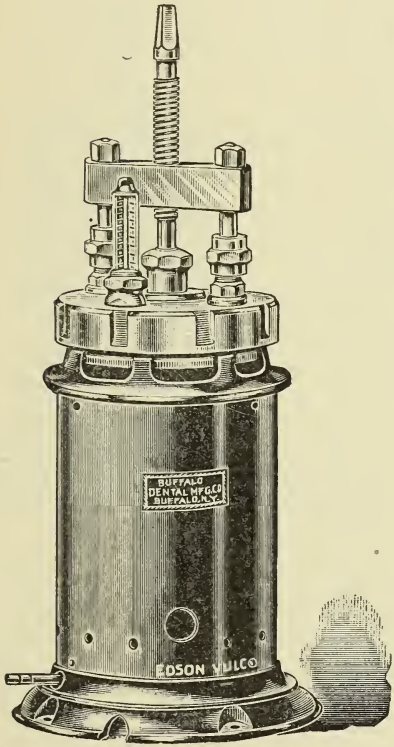
The bed plate jacket which is screwed to the bench allows an easy and ready method of handling.

GAS.

OIL.

Price, complete with two flasks.....$16.00

The Edson Flask-Closing Vulcanizer and Celluloid Apparatus.



This vulcanizer has the same pot and cover fastening as the Whitney, a simple screw thread, which has proved itself to be, all things considered, one of the most satisfactory fastenings in use for this class of vulcanizers.

The flasks are closed inside the boiler after steam has been generated therein, by means of a screw and cross-bar, which operate a clamping apparatus. The dentist is thus enabled to choose his time to close the flask, and to take advantage of the greater softness of the rubber consequent upon the higher temperature it is exposed to in the vulcanizer. This apparatus is provided with a Mercury Bath Thermometer; also, the B. D. M. Co.'s Safety Apparatus, and the Blow-off valve, mounted on a Lewis Manifold.

The clamping apparatus has lately been remodeled and strengthened, and the lower end of the screw is now attached to the boiler head by a cap-nut, so that the clamping apparatus can be either closed or opened by turning the screw.

The Lewis Heating Apparatus is furnished with this vulcanizer when ordered for gas. The top ring and base are bolted to the steel jacket to prevent rotation, the base being provided with holes so that it can be securely screwed to the work bench.

Our Combined Bed-Plate and Kerosene Heating Apparatus is furnished with the Edson Vulcanizer unless either gas or alcohol is specified.

PRICE.

Edson Flask-Closing Vulcanizer and Celluloid Apparatus complete, for Gas, Alcohol of Kerosene, including two flasks.....$25.00

No. 2 Improved Siphon.

For the Lewis Graduated Gas Regulator No. 4.

Gas Regulators are usually mounted on unsightly iron crooks, that are liable to become closed by rust, which often prevents the proper operation of the Regulator.

We have lately perfected a Siphon, that is in every way reliable, presents no objectionable features, and will not corrode.

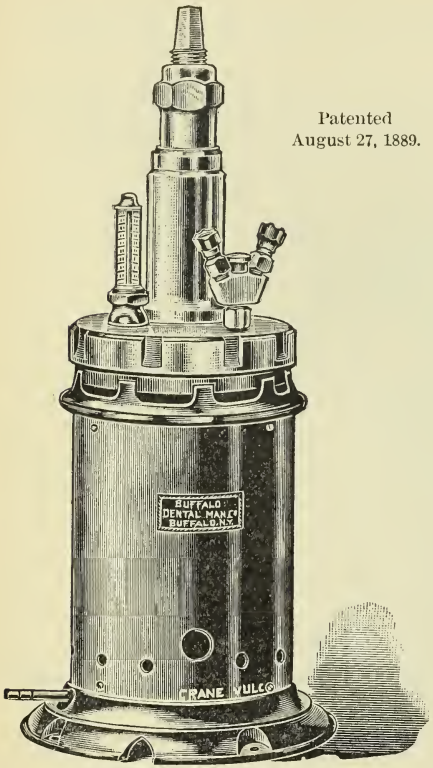
It is made entirely of brass, polished and nickel plated.

This Siphon is threaded for mounting the Lewis Graduated Gas Regulator No. 4.

PRICE.

Brass Siphon, No. 2.....$1.00

The Crane Flask-Closing Vulcanizer.



Patented August 27, 1889.

This vulcanizer has a screw-press attached to and forming part of the cover. Between the screw and the presser-foot which bears upon the flasks, is a heavy spiral spring, which equalizes the pressure, and follows up the flasks as they close.

The flasks, being packed in the usual way, are placed in the vulcanizer, which is then closed, and heat applied; the screw being run down in the meantime until its bearing upon the flasks is felt. When the thermometer indicates 260°, or thereabouts, the screw should again be turned down about three-quarters of an inch, or until a sufficient pressure is attained to insure the proper closing of the flasks. The gentle and continuous pressure of the spring will close the flask perfectly, while the breaking of the blocks and other effects of over-pressure will be avoided.

It will be observed that this apparatus gives the dentist complete control of the time for closing the flask. It is, therefore, superior to the spring clamps, which must be operated before they are put into the vulcanizer.

The Lewis Heating Apparatus is furnished with this vulcanizer when ordered for gas. The top ring and the base are bolted to the steel jacket to prevent rotation, the base being provided with holes so that it can be securely screwed to the work bench. Special flasks with long guide pins, but without bolts, are furnished. The illustration shows the vulcanizer as rigged for gas.

The Heating Apparatus for Kerosene for this vulcanizer combines the bed-plate and stove. The vulcanizer is placed in it when the cover is to be screwed on, and is not removed until the plate is vulcanized. The screw for closing the flask is operated at the proper time without any liability of moving the vulcanizer. This heating apparatus is illustrated on another page.

The pot of this vulcanizer is 4⅜ inches diameter. It is made of extra heavy copper, with a cast gun-metal bottom. The whole machine is made with special regard to strength and durability.

PRICE.

Crane Vulcanizer, complete, for two flasks, Gas, Alcohol or Kerosene.....$25.00

Combined Bed-Plate and Kerosene Heating Apparatus.

For the Casgrain, Crane, Edson and Whitney Vulcanizer

The bed-plate ring has a side flange upon it, by which it is fastened to the edge of the bench so as to overhang. Depending from the ring is the jacket, to which the Kerosene Stove is attached. The necessity for cutting a hole through the bench is thereby avoided, and the stove is brought out to a convenient position for use. The lamp has a four-inch wick, is securely held, and easily removed for filling. This apparatus is furnished with the Casgrain, Edson or Crane Vulcanizers, without advance in price.

PRICES.

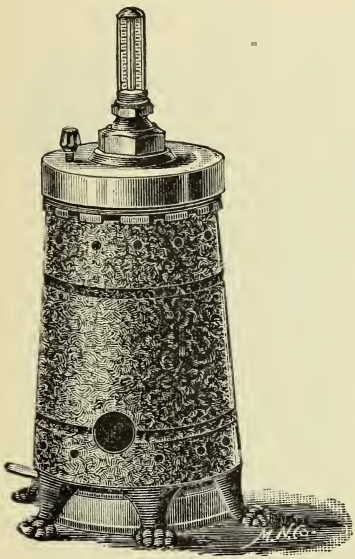
No. 30D. Combined Bed-Plate and Kerosene Heating Apparatus for Casgrain, Edson, Crane or Whitney 4½-inch Vulcanizers $2.50

No. 30E. Combined Bed-Plate and Kerosene Heating Apparatus for Whitney 4-inch Vulcanizers..... 2.50

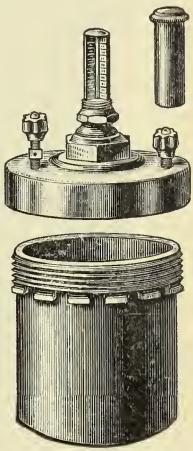
When ordered with either a 4-inch or 4½-inch Whitney Vulcanizer, in place of ordinary heating apparatus, 75 cents advance on list price of vulcanizer.

When ordered separately, specify whether for Casgrain, Edson, Crane or Whitney 4-inch or Whitney 4½-inch Vulcanizer.

The Whitney Vulcanizer.



The Whitney Vulcanizer was invented by the late Dr. B. T. Whitney more than thirty years ago. It consists of a copper pot, four inches in diameter, on which a brass head is screwed; a steam-tight joint being made by means of a rubber-packing in the head, which bears upon the edge of the pot. The pressure is thus brought evenly upon the parts, the screw-thread supporting the pot and preventing it from being drawn out of true.

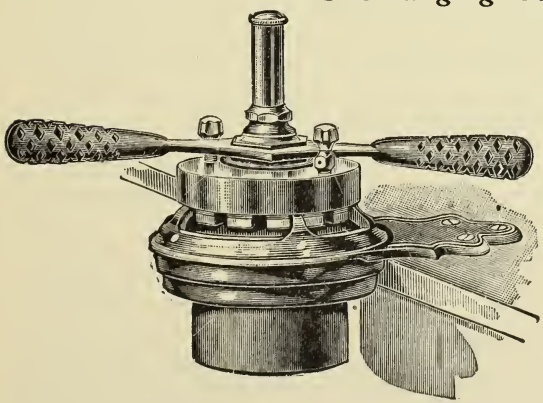


The B. D. M. Co.'s Safety Apparatus is applied to this Vulcanizer. This gives way and allows the escape of steam, if the temperature of the Vulcanizer should, by forgetfulness or oversight, rise to a dangerous extent. Experiments have shown a variation of as much as twenty degrees in the temperature as indicated by the thermometer, depending upon the presence or absence of air in the Vulcanizer; the mixture of air and steam not allowing the heat to pass freely through it to the thermometer. A Blow-off Valve has therefore been added, by means of which the air can be expelled from the Vulcanizer while it is heating up. These two adjuncts are mounted on the Lewis Manifold.

The Whitney Vulcanizer is closed by means of two wrenches, No. 3 and 8. These form the most convenient means for the purpose, for the traveling dentist. For those having a regularly appointed laboratory, the bed-plate and wrench, Nos. 9 and 10, are recommended. These are furnished with the Vulcanizer instead of the round and straight wrenches, Nos. 3 and 8, without any advance in price. If a hole in the bench is not practicable, the Raised Bed-Plate, No. 16, will be furnished at an advance in price of 75 cents. See also Overhanging Bed-Plate. The 17 Flask Wrench answers to close the flasks and the blow-off and safety valve. The heat is supplied by either gas, alcohol or kerosene.

No. 1. Whitney Vulcanizer, 4-inch, for one flask, gas, alcohol or kerosene..$12.00
No. 2. Whitney Vulcanizer, 4-inch, for two flasks, gas, alcohol or kerosene.... 14.00
No. 3. Whitney Vulcanizer, 4-inch, for three flasks, gas, alcohol or kerosene.. 16.00

Overhanging Bed-Plate.



For Whitney Vulcanizer.

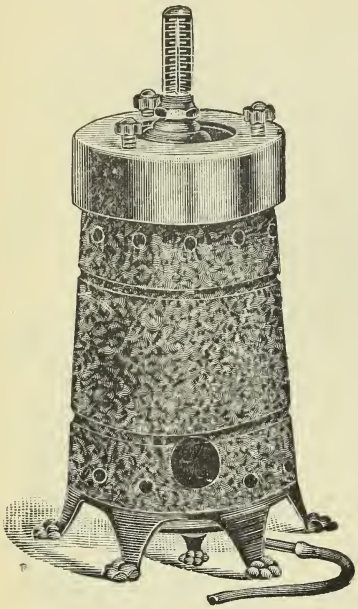
The combined bed-plate and kerosene heating apparatus, originally designed for the Edson and Crane Vulcanizers, has recently been altered to be used as an overhanging bed-plate to accommodate both the 4-inch and 4½-inch Whitney Vulcanizers.

This Bed-Plate is very strong, and is secured to the work bench by three screws. It obviates the necessity of cutting a hole in the work bench as required by some other patterns of Bed-Plate.

The engraving also shows our improved Bed-Plate Wrench No. 10.

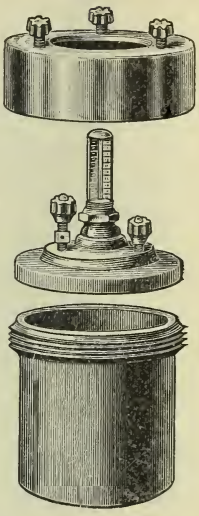
PRICES.

No. 19. Bed-Plate, for 4-inch Whitney Vulcanizer..... 75 cents.
No. 19A. Bed-Plate, for 4½-inch Whitney Vulcanizer..... 75 cents.
No. 10. Improved Bed-Plate Wrench..... 50 cents.



The Hayes Vulcanizer.

The Hayes Copper Boiler consists of a copper pot four inches in diameter, a cover containing the packing-joint, and a collar which screws upon a threaded ring which encircles the pot, and bears upon the cover to tighten the joint by means of three set-screws, which are plainly shown in the engraving. This fastening has proved to be very substantial. The Iron Clad Boiler is made precisely like the Copper Boiler above described, except that the copper pot is covered by a shell of malleable iron strong enough to withstand many times the pressure of steam used in vulcanizing. It is only made of 4 inches diameter, and for one, two, or three flasks. The B. D. M. Co.'s Safety Apparatus and a Blow-off Valve form part of the equipment of the Hayes Vulcanizers, and are mounted on the Lewis Manifold.



No. 17. Flask Wrench.

The Flask Wrench, No. 17, here illustrated, answers for closing the Hayes Vulcanizer and the flasks and operating the safety valve and blow-off.

Either gas, alcohol or kerosene heating apparatus is furnished as required.

No. 1 Hayes Vulcanizer, Copper, Gas, Alcohol or Kerosene.....$12.00
No. 2 Hayes Vulcanizer, Copper, Gas, Alcohol or Kerosene..... 14.00
No. 3 Hayes Vulcanizer, Copper, Gas, Alcohol or Kerosene..... 16.00
No. 1 Hayes Vulcanizer, Iron Clad, Gas, Alcohol or Kerosene..... 13.00
No. 2 Hayes Vulcanizer, Iron Clad, Gas, Alcohol or Kerosene..... 15.00
No. 3 Hayes Vulcanizer, Iron Clad, Gas, Alcohol or Kerosene..... 17.00

Four and One-Half Inch Screw-Top Vulcanizer.

This is made from the Edson patterns, without the clamping arrangement. It has the same screw fastening for the cover as the Whitney Vulcanizer; and it is, in fact, a large size of that machine. It is 4½ inches diameter, large enough to take the B. D. M. Co.'s "Large" flask if desired for dental purposes, and can be made to order, of any depth required for special use, such as rubber-stamp work.

No. 2, 4½-inch Screw-Top Vulcanizer, Gas, Alcohol or Kerosene.....$16.00
No. 3, 4½-inch Screw-Top Vulcanizer, Gas, Alcohol or Kerosene..... 18.00

Four and One-Half Inch Hayes Vulcanizer.

This Vulcanizer is the same as the ordinary Hayes Copper Boiler in all respects except size. It is half an inch larger in diameter, and is preferred by dentists who like to use extra large flasks, and have ample room for them. It is also used for rubber-stamp work to some extent, and for this purpose can be made specially of any depth to ten or twelve inches.

Two sizes kept in stock, for two or three flasks.

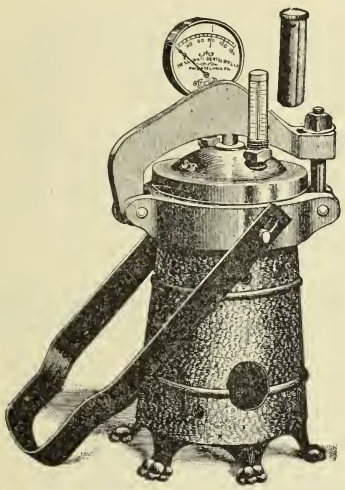
No. 2, 4½-inch Hayes Vulcanizer, Gas, Alcohol or Kerosene.....$16.00
No. 3, 4½-inch Hayes Vulcanizer, Gas, Alcohol or Kerosene..... 18.00

Repairs on Vulcanizers.

TAKE NOTICE.—We must insist on having all parts of a Vulcanizer sent us for repairs. Dentists will save themselves much annoyance, delay, and at times additional expense, by observing the above rule. All vulcanizers, after being repaired, are thoroughly tested, no matter how trivial the repairs have been, and unless we have all the parts, we can not be sure that the repaired vulcanizers are steam tight, and in a satisfactory condition. In every instance, send Cap, Thermometer and Pot. This rule also applies when a gas regulator is to be fitted to a vulcanizer.

We will quote prices on any part of any Vulcanizer when requested.

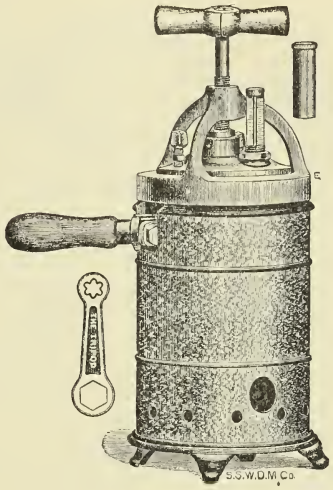
The Mann Vulcanizer.



	Two-Case.	Three-Case.
Gas or Alcohol Less Steam Gauge	$18 00	$20 00
Kerosene Less Steam Gauge	18 50	20 50
Boiler and Top, alone	15 00	16 00
Steam Gauge, with Siphon, complete, extra	6 50	

New Philadelphia Vulcanizer.

Tripod.



	Two-Case.	Three-Case.
Gas or Alcohol	$18 00	$20 00
Kerosene	18 50	20 50

With Screw Cover Instead of Tripod.

	Two-Case.	Three-Case.
Gas or Alcohol	$14 00	$16 00
Kerosene	14 50	16 50

Furnaces.

Furnaces Nos. 1 and 2 are oval, with hinged doors, the center sections cased with sheet iron. No. 1 takes muffles 12 in. long, 3¾ in. wide, inside measurements. Outside measurements for the two-muffle furnace are 43 in. high, 21 in. wide, and 16 in. deep; for the one-muffle furnace, 34 in. high, 21 in. wide, 16 in. deep.

No. 2 Furnace takes a muffle 11 in. long, 3½ in. wide, inside measurements. Outside measurements are 33 in. high, 20 in. wide, and 14 in. deep.

These Furnaces are not carried in stock, but are made only on order.

No. 1, For two Muffle, with 4 Muffles, 6 Slides, and half-peck Fire-Clay, packed in cask for shipping.....$ 33.75

No. 1, For one Muffle, with 4 Muffles, 6 Slides, and half-peck Fire-Clay, packed in cask for shipping..... 27.50

No. 2, For one Muffle, with 4 Muffles, 6 Slides, and half-peck Fire-Clay, in cask for shipping..... 23.00

Lilliput, Tees's. Height 18½ in., base 12x8 in. With 2 Muffles, Slide, Poker, Tongs, 2 Coke Screens, ½ lb. Kaolin, and Instructions (boxed)..... 31.00

Model. For Continuous-Gum Work. Total height 24 in., diameter 12½ in. With 2 Muffles, 1 pair Tongs, and a Poker (boxed)..... 26.00

Soldering (see Soldering Appliances below).

Furnace Equipments.

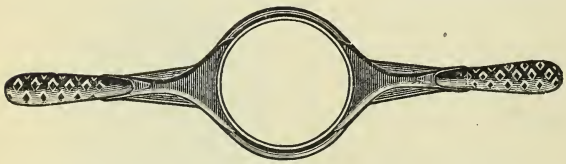
Fire-Clay.....per quart	$ .06
Muffles, No. 1, Roberts. 13⅞x3¾x2⅝ in., inside measurements	1.00
Muffles, No. 1, 12x3¾x3 in., inside measurements	.88
Muffles, No. 2, 11x3½x2½ in., inside measurements	.75
Muffles, No. 3, 10½x3½x2 in., inside measurements	.60
Muffles, for Lilliput Furnace, 7x3⅛x2⅛ in., inside measurements	.75
Muffles, for Model Furnace, 8x3½x2½ in., inside measurements	.80
Slides, No. 1, $0.12; No. 2, $0.11; No. 3	.10
Slides, for Model or Lilliput Furnaces, 7 in. long, 3⅛ in. wide	.15

Soldering Furnaces.

Russia Iron, with handle.....each	$2.00
Russia Iron, with stand.....each	2.00

Vulcanizer Wrenches and Bed-Plates.

Malleable Iron.



No. 1. Edson or Crane Vulcanizer Cap Wrench.
Price.....75 cts.

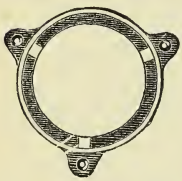
No. 2. Edson or 4½-inch Whitney Bed-Plate.
Price.....25 cts.

No. 21. Lewis Cross-Bar Wrench.
Price.....25 cts.

No. 23. Casgrain Cap Wrench.
Price.....30 cts.

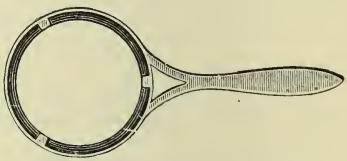
No. 11. Vulcanizer top Wrench.
Price.....25 cts.
For the Crane or Edson Vulcanizers.

No. 14. Edson Stuffing-Box Wrench.
Price.....15 cts.
One end for tightening the stuffing-boxes; the other for safety apparatus and blow-off.



No. 9. Bed-Plate for Whitney Vulcanizers, 4-inch.
Price.....25 cts.

No. 18. Pin Wrench for Crane Vulcanizer.
Price.....15 cts.



No. 8. Whitney Round Wrench.
Price.....50 cts.

No. 19. Spanner for Crane Vulcanizer.
Price.....15 cts.

No. 24. Casgrain Stem Wrench.
Price.....25 cts.

No. 17. Hayes or Whitney Flask Wrench; also for Safety Valve and Blow-off.
Price.....15 cts.

No. 3. Whitney Straight Wrench.
No. 4. Wrench for Crane Stuffing-box.
Price.....15 cts.

No. 10. B. D. M. Co.'s Improved Bed-Plate Wrench for Whitney Vulcanizer.
Price.....50 cts.

No. 20. Pot Lifter for Lewis Cross-Bar Vulcanizer.
Price.....15 cts.

No. 12. Wrench for Groshan's Flask.....each 15 cents.

Mercury Bath Thermometers.

For Dental Vulcanizers.

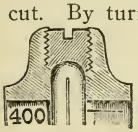
The annexed cut shows the Mercury Bath Thermometer—full size—that is now placed on all vulcanizers of our make. As so much depends on a reliable thermometer, parties purchasing vulcanizers should see that the genuine Mercury Bath Thermometer is placed on each machine.

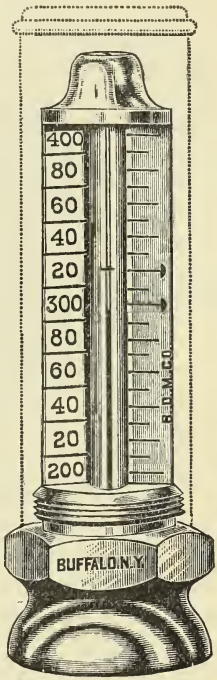
The great quantity of unreliable thermometer tubes furnished by different parties induced an investigation to ascertain, if possible, the causes of their failure, and we are glad to say it has resulted in an improvement both in the quality of material used and the manner of production; and, as a mark of distinction to protect the trade and the dental profession from imposition, we have caused a trade mark to be registered in the Patent Office. This consists of a Red Stripe extending along the back of the white ground commonly employed in the thermometer tubes. It is formed in the tubes in the same manner as the white ground itself.

Hereafter all of our tubes will have this mark in the glass, and all the scales will have the initials B. D. M. CO. stamped on the face. Without each of these, any tubes may be declared spurious and probably worthless. Any imitation of these tubes will be in violation of law, and all imitators of them will be held responsible.

We often receive applications for thermometer tubes without scales, the dentist evidently supposing that any tube will fit the old scale. This is a mistake. The position of the 320° point and the distance between it and the 212° point vary in different tubes. Each scale must, therefore, be especially fitted for its tube, and care should be exercised that they be not separated. Orders for thermometer tubes without scales will not be filled.

Provision is made on the improved Thermometer Case—herewith illustrated—for the correct adjustment of the thermometer tube to the indications on the scale, in case the scale should not be accurately cut. By turning the screw on the top of the inside thermometer case with a screw driver, the thermometer tube can be raised or lowered as required, till the black mark on the tube and 320° mark on the scale coincide.



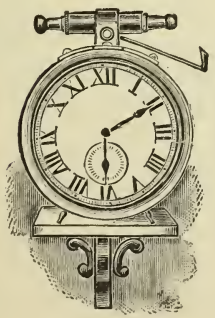


B. D. M Co.'s Mercury Bath Thermometer and new inside Thermometer Case.

PRICES.

Mercury Bath Thermometer and Case, complete	$1.75
Thermometer Tube and Scale	.75
Thermometer Case, only	1.00

B. D. M. Co.'s Time Regulator.

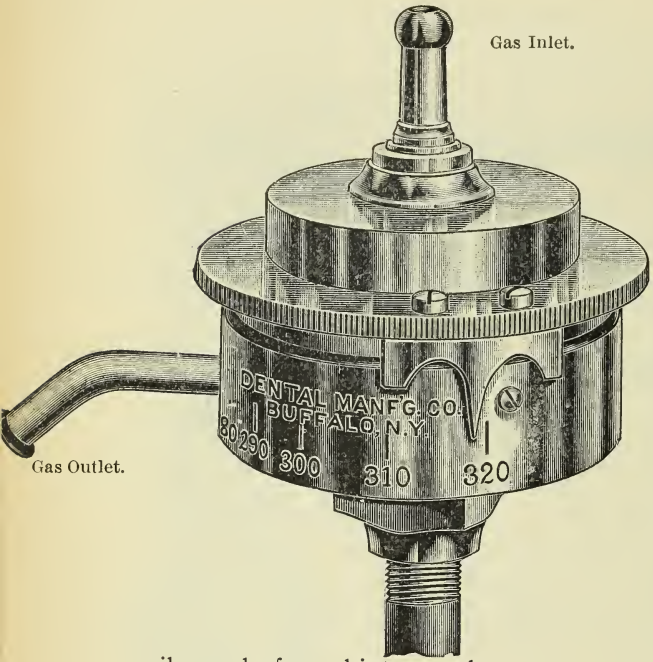


This Time Regulator is of new design. In this, as in the gas regulator, the use of rubber in any form, excepting as connecting tubing, has been entirely discarded, as experience has proved that substance to be very prone to deterioration from a variety of causes. It has a metallic valve, which is gas tight, whether it be open or closed, which will be found to operate with ease and certainty. The timing device is operated by the minute arbor of the clock, instead of the hour arbor, as is usually the case. It is capable of very delicate adjustment as to time, its variations being limited by seconds instead of minutes.

The No. 1 Time Regulator is used in connection with Gas Regulators Nos. 1 and 4. No. 2 Time Regulator is used with Gas Regulator No. 2.

PRICES.

No. 1. B. D. M. Co.'s Time Regulator	$4.00
No. 2. B. D. M. Co.'s Time Regulator	5.00



No. 4 Lewis Graduated Gas Regulator.

For Dental Vulcanizers.

An entirely new Gas Regulator, superseding the Coolidge-Lewis Regulator No. 4.

Patented May 15, 1894.

Gas Regulators for Dental Vulcanizers have been in use for a number of years, and have received the highest possible commendation from those using them. They wholly relieve the operator from all care or anxiety about vulcanizing, leaving him free to attend to patients, or leave the office for an unlimited time, if he so desires.

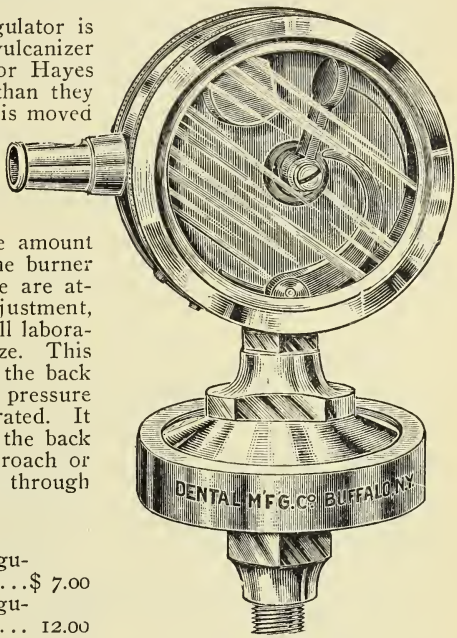
The Gas Regulator holds the temperature of the vulcanizer at the proper point, and the Time Regulator shuts off the gas at the proper time. Adjustment is easily made for a higher or lower temperature, or for a longer or shorter time, so that as complete control is had of the vulcanizing process as would be possible by the most careful attention, without the necessity of any oversight by the operator after the proper adjustments are made, and the gas under the vulcanizer lighted. Owing to the extreme regularity of the heat, better results are obtained in vulcanizing than by the usual methods. In a word, no dentist who uses gas for vulcanizing can afford to be without a Gas Regulator if he values his time, comfort or safety.

The Buffalo Dental Manufacturing Co. have from time to time brought out several successful Gas Regulators, and from the experience gained in this special line of goods, have now been enabled to produce a Gas Regulator that is believed to be superior in every way to any heretofore constructed.

The No. 4 Lewis Graduated Gas Regulator, while resembling in outward appearance other Regulators heretofore manufactured, is in its essential points entirely different from them, and a trial of many months has proved it to be a remarkably perfect and reliable Regulator. This Regulator is capable of being set to temperatures varying from 280° to 320°. To vulcanize at any of the degrees of temperature marked on the graduated base, all that is required is to turn the milled hand-plate till the pointer is over the degree desired. This can be done either before or after lighting the gas under the vulcanizer. A small screw is inserted in the base, which acts as a stop for the pointer, and prevents the Regulator from being set, either by design or accident, to maintain a higher temperature than the highest graduation on the base, thereby endangering the safety of the vulcanizer. This Regulator requires no special adjustment after leaving the factory. We strongly recommend the No. 2 brass siphon for mounting all gas regulators or steam gauges.

Lewis Graduated Gas Regulator No. 4, without Time Regulator..$4.00
With No. 2 Brass Siphon, extra..... 1.00
Lewis Graduated Gas Regulator No. 4, with Time Regulator..... 8.00

Coolidge Gas Regulator No. 2.



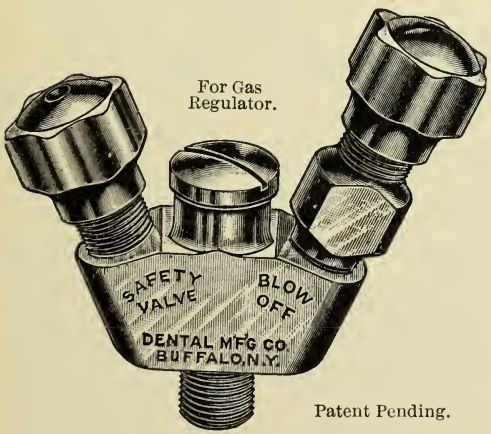
This improved form of the Coolidge Gas Regulator is intended especially for use with any style of vulcanizer which exceeds the dimensions of the Whitney or Hayes Vulcanizers, and requiring a larger gas supply than they do. By the use of multiplying levers, the valve is moved so quickly that it will turn on a full flow of gas if the pressure drops but two or three pounds. It will operate equally well whether a large or small quantity of gas is used, and is applicable to the Whitney or Hayes Vulcanizers.

It has a special adjustment for controlling the amount of gas which must be allowed to pass to keep the burner alight when the desired temperature and pressure are attained and the gas is turned down. By this adjustment, the burner may be kept alight whether it be a small laboratory Bunsen or one of three or four times the size. This adjustment is made by turning a small screw at the back of the case. Its adjustment for temperature and pressure is also new, quickly comprehended and easily operated. It is made by turning the milled plate which forms the back of the casing. This causes the valve-seat to approach or recede from the valve, as will be seen by looking through the glass front.

PRICES.

Coolidge Gas Regulator No. 2, without Time Regulator ..... $ 7.00
Coolidge Gas Regulator No. 2, with Time Regulator 12.00

The Lewis Manifold for Dental Vulcanizers.



Patent Pending.

This device is made to carry the blow-off, safety valve and gas regulator—as used on dental vulcanizers—all in one casting, and obviates the necessity of drilling two or more holes in the vulcanizer cap for the insertion of these adjuncts.

The center opening is for convenience of attaching a gas regulator. This is done by removing the cap-screw and screwing the coiled-pipe connection, or Siphon No. 2, in its place.

The manifold is a great convenience for those having the old style of vulcanizers—with one hole in the cap—and desiring all the latest attachments, as it can be easily screwed into the cap without the necessity of drilling additional holes.

It is plainly stamped "Safety Valve" and "Blow-off," thus avoiding confusion between these two attachments.

In ordering, state whether for a Whitney, Hayes or Lewis Cross-Bar Vulcanizer.

PRICES.

Lewis Manifold only, without Safety Valve or Blow-off..... $1.50
Lewis Manifold, complete, with Safety Valve and Blow-off..... 3.25

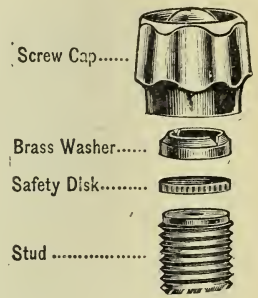
B. D. M. Co.'s Improved Safety Apparatus.

For the prevention of Vulcanizer Explosion.

This apparatus consists of a thin metal disk, which is retained on the face of a hollow stud by means of a screw-cap. If the vulcanizer is neglected, and the steam pressure is allowed to rise so as to be dangerous, the safety disk will be blown out, and the pressure will be relieved.

The engraving shows the manner in which the disk and washer are applied.

The genuine "B. D. M. Co." safety disks are manufactured only by the Buffalo Dental Manufacturing Co.



PRICES.

Safety Apparatus, with package of disks.....$1.00
Safety Disks, per package..... .25

The B. D. M. C.'s Blow-off Valve.

This should be opened when heat is applied to the vulcanizer, and allowed to remain open until there has been a free escape of steam for two or three minutes. The air passes out with the escaping steam, and an atmosphere of pure steam in the vulcanizer is secured. The thermometer, under this condition, will always show the same temperature for a certain steam pressure. A variation between the indications of the steam gauge and thermometer of as much as 20 degrees has been noticed when the air was allowed to remain in the vulcanizer.

PRICE.

B. D. M. Co.'s Blow-off Valve..... 75 cents.

Steam Gauge for Vulcanizers.

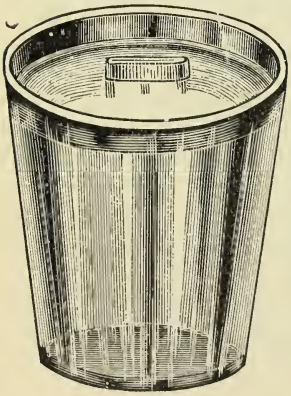
This is a reliable Steam-Gauge, to which is connected a condensing-chamber, with pipes so arranged as to form a trap. Above this trap is placed a safety-disk attachment.

This Gauge can be placed on any of the modern vulcanizers having a blow-off or safety attachment, by simply removing the cap of same and screwing on the gauge.

Price, complete.....$7.50

The Buffalo Rubber Gauge.

For determining the necessary quantity of rubber to be used in packing Dental Flasks.



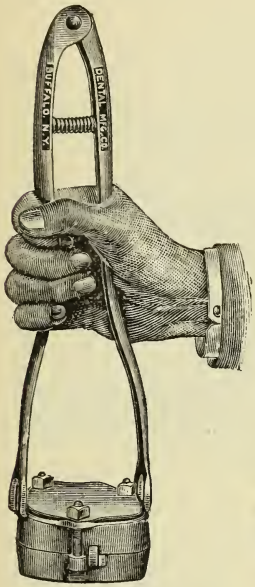
This consists of an ordinary tumbler, with a dished cover of spun brass, having a short flat tube soldered into a center opening. The trial plate is put into the tumbler, which is nearly filled with water, so that when the cover is put on, a little will overflow into it through the flat tube. The overflow is then thrown away, the trial plate removed, and replaced with rubber. When the water again stands at the top of the tube, the gauge contains exactly the bulk of the trial plate in rubber. The small sectional area of the tube, the only escape which is afforded to the water, renders the gauge very sensitive, and a very exact measurement is secured. The operation takes but a minute's time, and will be found a much better method than guessing.

PRICE.

Buffalo Rubber Gauge ..... 50 cents.

Starr's Rubber Gauge.

Price, each..... 30 cents.

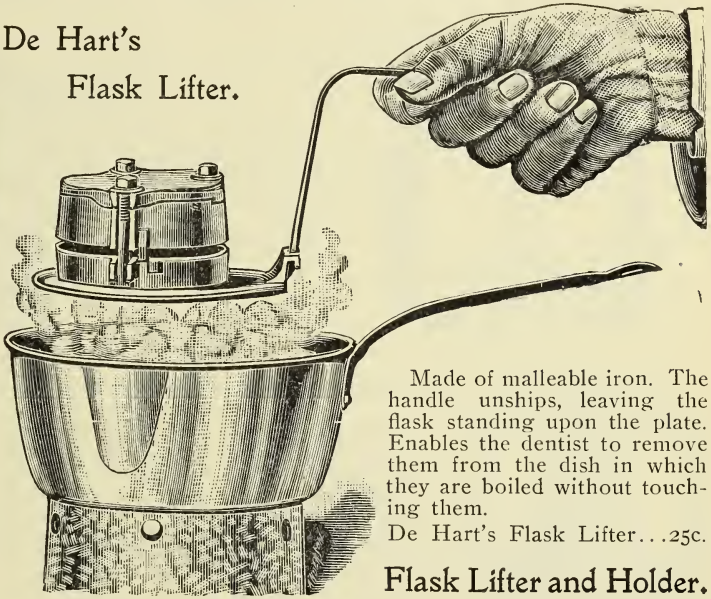


No. XII. B. D. M. Co.'s Flask Tongs.

These tongs are of malleable iron, nickled on the rough, and 13 inches long. They will be found very useful for litting flasks from the vulcanizer. They are of sufficient length to reach the bottom of a three-case vulcanizer, and will securely grip any flask.

Price.—No. XII. Flask Tongs.....50c.

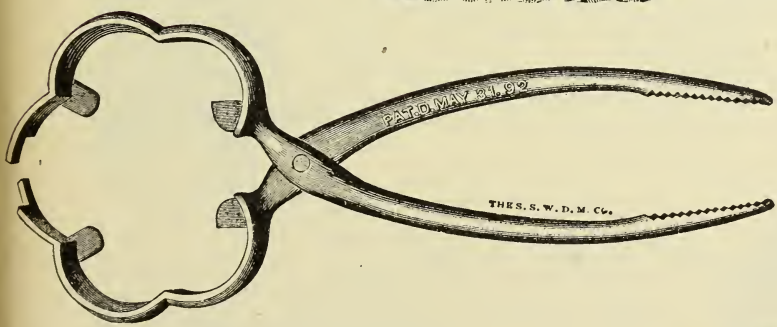
De Hart's Flask Lifter.



Made of malleable iron. The handle unships, leaving the flask standing upon the plate. Enables the dentist to remove them from the dish in which they are boiled without touching them.

De Hart's Flask Lifter...25c.

Flask Lifter and Holder.



The cut is a little more than one-third the actual size. The serrated ends of the handles are perfectly adapted for lifting the flask from the vulcanizer, and the clamp end holds any size or form of flask, while fastening the screws.

Price .....each 65c.

Endless Packing.

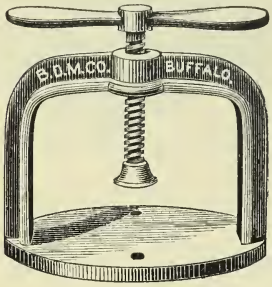
Endless Packing for the Hayes or Cross-Bar 4-inch Vulcanizer .....each 10c.
Endless Packing for the Hayes or Cross-Bar 4½-inch Vulcanizer .....each 15c.
Endless Packing for the Whitney 4-inch Vulcanizer .....each 8c.
Endless Packing for the Whitney 4½-inch, Crane or Edson Vulcanizer .....each 8c.
Strip Packing for the Whitney 4-inch Vulcanizer .....each 5c.
Endless Packing for the Mann Vulcanizer.....each 12c.
Endless Packing for the Davis Vulcanizer.....each 12c.
Endless Packing for the Boston Vulcanizer.....each 10c.
Endless Packing for the Casgrain Vulcanizer.....each 25c.
Endless Packing for the Seabury Vulcanizer.....each 40c.
Endless Lead Packing for Mann Vulcanizer.....each 15c.
Endless Lead Packing for Davis Vulcanizer.....each 15c.

Heating Apparatus for Vulcanizers.

Heating apparatus for Vulcanizers is included in price of the Vulcanizer, but we are also prepared to supply the various heaters separately when desired.

PRICES.

Kerosene Heating Apparatus, complete	$1.50
Gas Heating Apparatus	1.50
Alcohol Heating Apparatus	1.50

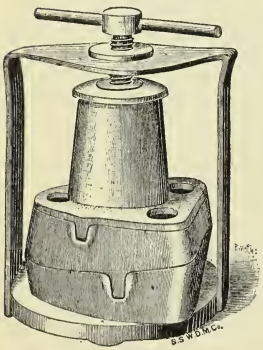


Flask Press.

For closing flasks after packing, and will effect considerable savings in bolts and nuts. The B. D. M. Co.'s Flask Press, as now made, is from entirely new patterns, much stronger than the old style, and enlarged to admit of using No. 18 large flask. It has a large square-thread screw, well fitted, and should last a lifetime.

PRICE.

Flask Press $1.50

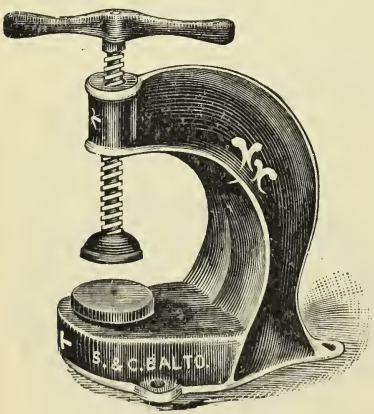


Dr. Donham's Spring-Clamp for Flasks.

A simple and effective method of utilizing the tension of a spring for closing flasks in vulcanizing. This device gives all the advantages of continuous pressure, and dispenses with flask-bolts. Made in two sizes, holding two or three flasks, and adapted to the different vulcanizers. The two-case size is used for a single flask, as shown in the illustration.

PRICES.

Springs, Two or Three-Case ..... each	$1.25
Brass Flasks ..... each	1.00
Two-Case Spring, with one Brass Flask, as shown in cut..	2.25
Two-Case Spring, with two Brass Flasks.....	3.25
Three-Case Spring with three Brass Flasks.....	4.25



No. 2. New Style Flask Press.

Made by Snowden & Cowman Mfg. Co.

This Press is made of cast iron, very heavy, with steel screw and detachable handle. It has a Pivot Plate to level up the flask, insuring always a central pressure on the flask; will take any flask in the market.

Price..... $1.50

Boiler for Heating Flasks.

Made of extra heavy tin, with wooden handle. Capacity for four flasks.

Price $1.50

Vulcanite Solder for Repairing Artificial Plates.

Our Vulcanite Solder works admirably in mending vulcanite plates when the directions are carefully complied with.

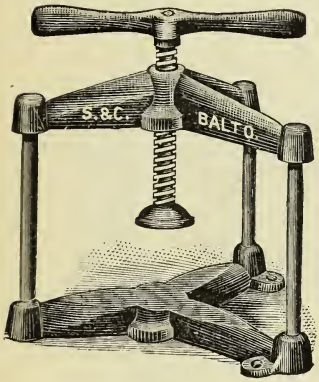
Price ..... per bottle $ .25

Rubber Solder (Fusible Metal). Wood's.

Per Ingot $1.00

No. 1. Old Style Improved Flask Press.

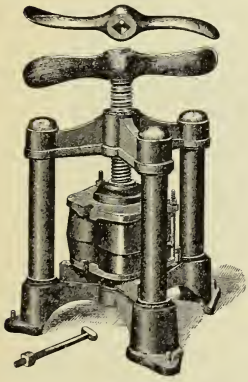
Made by Snowden & Cowan Mfg. Co.



This Press is intended to close the flask after packing with rubber. It is of great advantage, saving the screws and flasks. The upright rods are of wrought iron and the handle of the screw can be detached. They are well made and very strong, and has been made larger, so that they will take any Flask in the market.

Price $1.50

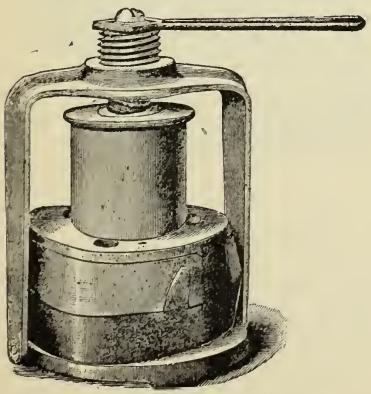
The Handy Flask Press.



The Handy Flask Press is so constructed that the bolts of the Flask may be placed in their position after the two parts are put together, without removing it from the Press. The top and bottom plates are connected together at their corners by wrought-iron screw-bolts passing through tubes, and all are clamped together by nuts.

Price, japanned $3.00

The Seabury Rubber Compress.

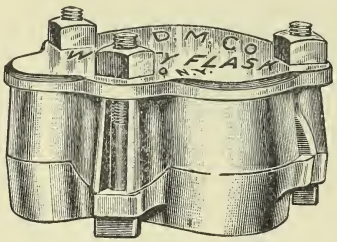


Designed to close the flask, with a uniform pressure, in the vulcanizer, when the rubber melts, at about 250° Fahr., and thus avoids all danger from forcible pressure applied while the rubber is hard.

Price, Two or Three Flask Compress, including Lever and Block $2.00

Dental Flasks.

A variety of flasks for vulcanite work is illustrated below. The cuts give a good idea of their appearance and construction, and their inside dimensions in inches are also given. The measurements are given in the following order: 1st, from front to back; 2d, from side to side; 3d, height.

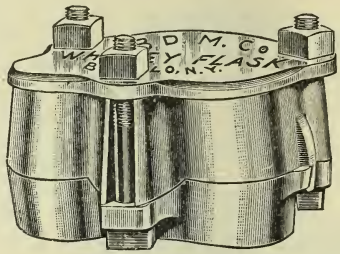


No. 1. Whitney Flask.

Shallow Bottom and Shallow Ring.

Size, $2\frac{3}{8}$x$3\frac{5}{16}$x$1\frac{7}{16}$.

PRICE.—Brass $1.25
Malleable Iron ..... .80

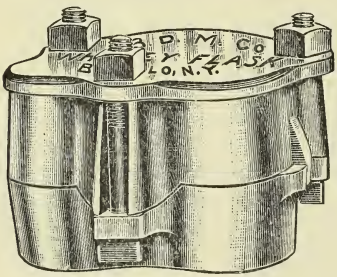


No. 2. Whitney Flask.

Shallow Bottom and Deep Ring.

Size, $2\frac{3}{8}$x$3\frac{5}{16}$x$1\frac{5}{8}$.

PRICE.—Brass $1.25
Malleable Iron ..... .80

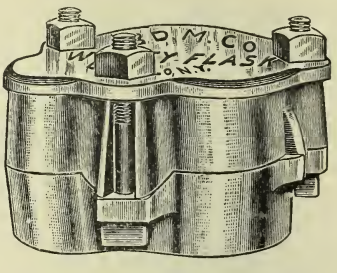


No. 3. Whitney Flask.

Deep Bottom and Deep Ring.

Size, $2\frac{3}{8}$x$3\frac{5}{16}$x$1\frac{7}{8}$.

PRICE.—Brass $1.25
Malleable Iron ..... .80

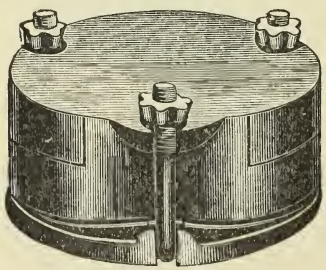


No. 4. Whitney Flask.

Deep Bottom and Shallow Ring.

Size, $2\frac{3}{8}$x$3\frac{3}{16}$x$1\frac{11}{16}$.

PRICE.—Brass $1.25
Malleable Iron ..... .80

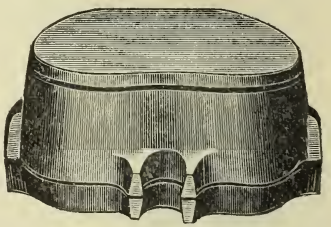


No. 5. Hayes Flask.

Size, $2\frac{3}{4}$x$3\frac{1}{4}$x$1\frac{3}{8}$.

Made either in malleable iron or brass. The clamp is always malleable iron.

PRICE.—Brass, with clamp $1.50
Malleable Iron 1.00
Clamp, separately ..... .50



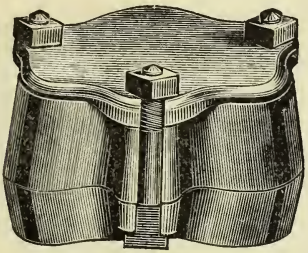
No. 6. Edson Flask.

Size $2\frac{3}{4}$x$3\frac{7}{16}$x$1\frac{9}{16}$.

It is closed by the stirrup mechanism of the Edson Vulcanizer, and consequently has no bolts. It has very long and heavy guide pins, and is intended for use with either vulcanite or celluloid.

PRICE.—Brass $1.50
Cast Iron 1.00

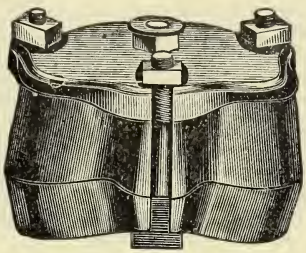
Dental Flasks.—Continued.



No. 7. Slot Flask.

Size, 2½x3¼x1⅝.

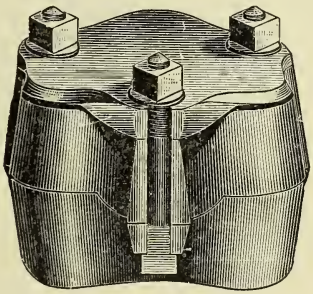
PRICE.—Brass $1.25
Malleable Iron .... .80



No. 8. Brown Flask.

Size, 2½x3¼x1⅝.

PRICE.—Brass $1.25
Malleable Iron .... .80

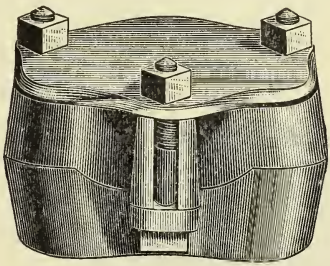


No. 13. Slot Flask.

Deep.

Size, 2½x3¼x1⅞.

PRICE.—Brass $1.25
Malleable Iron .... .80

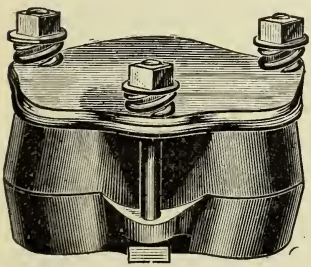


No. 18. Whitney Flask.

Large.

Size, 2¾x3⅝x1⅜.

PRICE.—Brass $1.25
Malleable Iron .... .80



Extra Long Bolts with Springs, for Whitney Flasks.

These bolts and springs will be found to be a perfect substitute for the Donham or other spring clamps. They will fit either the No. 1, 2, 3, 4 or 18 flask.

PRICES.

Extra Long Bolts with Springs, per set of three.....$ .15
Springs only, per set ..... .05
No. 1, 2, 3, 4 or 18 Flask, with Long Bolts and Springs. .80

No. 16. Elliott Flask.

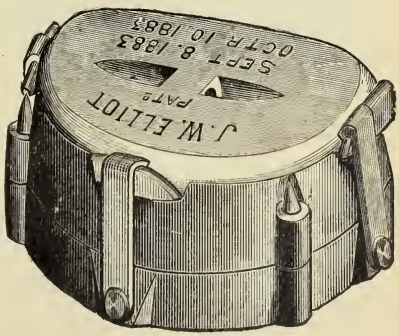
Pat. Sept. 18, 1883.

Size, 2¾x3¼x1⅝.

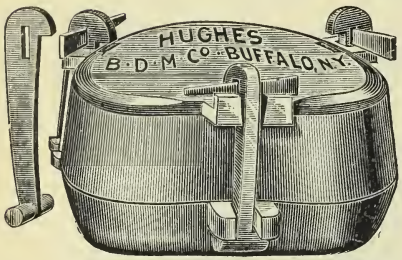
The clasps swing over inclines or lugs on the cover, and hold the parts of the flask tightly together. The lugs are put below the surface, that the flask may be placed either side up. The flask can be carried when hot by a wire hook, which is passed through the hole in a section of the cover. Made in brass only.

PRICE.

Elliott Flask, Brass $1.50



No. 21. Hughes Wedge Clamp Flask.



Patent Aug. 2, 1887.

Size, 2¾x3⅜x1⅜.

The several parts of this flask are held together by means of keys passed through slotted clamps, thereby doing away with the ordinary bolts and nuts. This method is represented as being a very quick way of securing the flask together. A flask press greatly facilitates the closing of the flask before applying the clamps. Made in brass only.

PRICE.

Hughes Flask, Brass $1.50

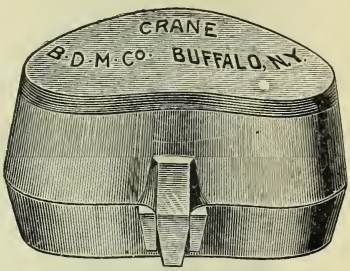
No. 20. Crane Flask.

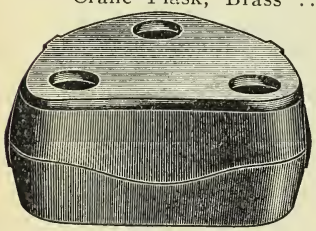
Size, 2⅞x3½x1⅝.

This flask is designed especially for the Crane Vulcanizer, and is the only one used in it. It is a large sized and strong flask. Made in brass only. No bolts required.

PRICE.

Crane Flask, Brass $1.50





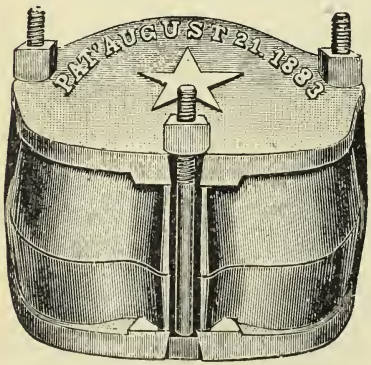
No. 22. Donham Flask.

Used in connection with the Donham Spring.

PRICE.

Donham Flask, Brass $1.00

No. 25, The Improved Star Reversible Flask.

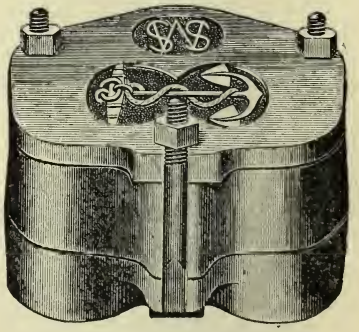


Two sizes, Regular and Extra Large.

PRICES.

Regular, Malleable Iron, Nickel-plated .....$ .80
Regular, Brass 1.25
Extra Large, Malleable Iron, Nickel plated 1.25
Extra Large, Brass 2.00

Anchor Flask.



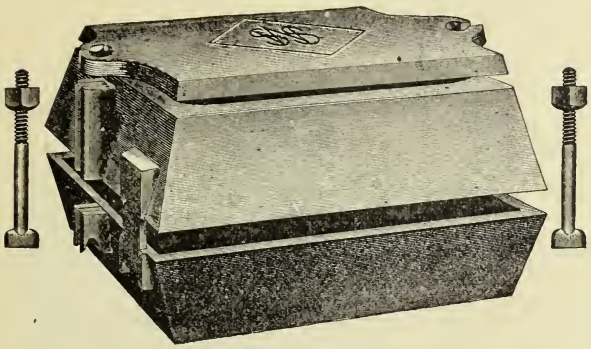
Price .....Iron, $ .80
Price .....Brass, 1.25

The Seabury Dental Flask.

Shown in connection with Seabury Rubber Compress on page 575.

Price each..... $ 1.25

Box Flask.



This Flask is specially designed for extra large cases or for making appliances like splints for fractures, etc. It is made in two sizes, viz.:

No. 1 adapted to two-case vulcanizers.

No. 2 adapted to three-case vulcanizers.

The construction of the Flask is such that very nearly all the available space in the boiler is utilized.

Price ....each $1.20

The Griswold Flask.

The Griswold Flask is made of $\frac{9}{32}$-inch rolled brass. It is shaped over steel dies. It is polished both inside and outside, and is of uniform thickness.

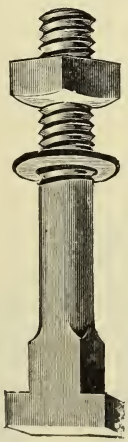
Price .....each $1.00

B. D. M. Co.'s Flask Bolts.

Our Whitney Flask Bolts are made from patterns, with extra thick nuts, which give about double the wear to the bolt, as compared with those formerly made.

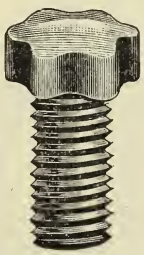
Our Hayes Flask Bolts are made of Forged Steel, with malleable iron nuts. Purchasers will please observe that the genuine Hayes Bolts are stamped "B. D. M. Co." on the bolt, and the words "Forged Steel" are on each package of bolts. We believe our flask bolts to be the best and most durable in the market. Each set is now put up in a suitable box bearing our imprint.

Whitney New Style.



Whitney Slot.

Hayes Clamp.



Set Screw for Hayes Vulcanizer.

"Star."

PRICES.

Whitney, New Style	per set of 3..12 cents.
Whitney Slot (or Brown's Vulcanite)	per set of 3..12 cents.
Extra long bolts, with springs	per set of 3..15 cents
Star Bolt, for S. S. W. D. M. Co.'s Star Flask	per set of 3..25 cents.
Hayes Steel Clamp Bolts	per set of 3..25 cents.
Brown's Celluloid Bolts	per set of 3..50 cents.
Hayes Set Screw for Screw-Collars	per set of 3..25 cents.
Bolts and nuts for Groshan's Flasks	per set of 3..25 cents.

Watt's Improved Metal.

Manufactured by The Ransom & Randolph Co., Toledo, Ohio.

This metal is the result of diligent research aided by abundant leisure and long experience in the science of metallurgy.

It is stronger and runs sharper than any now in use, while it withstands chemical action in the mouth better than 18 carat gold.

It has no equal for lower plates, gives a much better fit than rubber, celluloid or gold, and is a good conductor of heat and electricity. Weight is often advantageous, but if shrinkage is very great, a base plate of the metal may be made and the teeth attached to it with rubber or celluloid. Beautiful upper or lower dentures may thus be made, and will command a much higher price than the ordinary rubber plate your neighbors make.

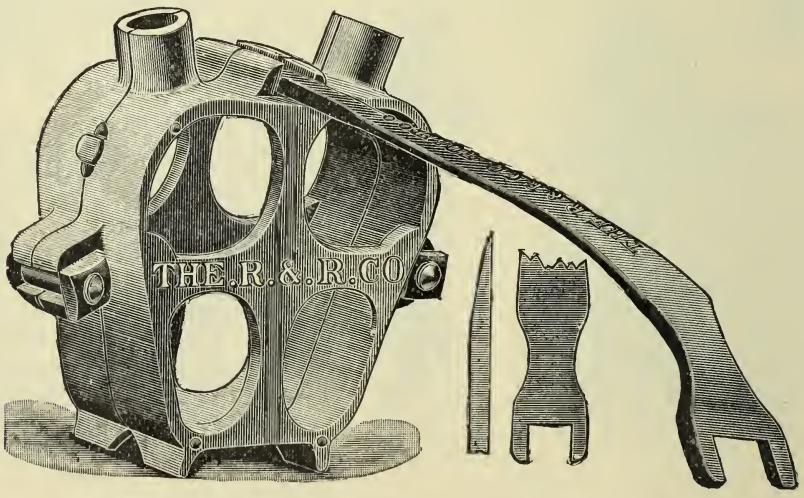
Full directions with each ingot. The cut shows the exact size and shape of the ingots. Any other form is an imitation. Six ingots to the pound.

Price per Ingot $1.00

Watt's Improved Moulding Flask.

Manufactured by The Ransom & Randolph Co., Toledo, Ohio.

The Watt's Improved Moulding Flask has many advantages over the discarded style. The two parts are held together with bolts, and the handle attaches to the flask at the top, thus placing the weight below the point of contact, which enables it to be held steady while



pouring the metal. The handle is also a wrench at one end, while the other end is wedge shaped to assist in separating one part of the flask from the other.

Price, complete $1.00

If sent by mail, postage extra twenty-five cents.

Weston's Flask.

For Casting .....each $1.00

Traun's "Ideal" Dental Rubber.

No dentist is ignorant of the fact that the quality of his work depends greatly upon the material he uses.

A dentist who uses inferior dental rubbers is risking his professional reputation.

The patient does not discriminate between bad work and bad material.

The best professional skill is not able to make a poor rubber do the work of a good one.

It is absolutely essential that you should use the best dental rubbers you can get.

This means that you should use rubbers made by a house which has experience and in which you have confidence.

Our experience in making rubber goods extends over a period of 44 years.

In that time we have learned all there is to know about making dental rubbers.

When we say that our "Ideal" Dental Rubber is the strongest, toughest and most elastic dental rubber made, you can rely upon our words.

The "Ideal" is the rubber which every practitioner can use with confidence—his reputation will be safe in its hands.

It makes practically unbreakable plates. Upon polishing, it developes a rich dark red color and a smooth glossy surface which is pleasant to the mouth of the patient. It is uniform in color and in texture. It is always the same, reliable in every way.

It is a rubber that, if you once use it, you will use constantly and with implicit confidence.

With all that, it is not expensive to use, as its specific gravity is light, and it gives more sheets to the pound than any other make.

The "Ideal" Dental Rubber vulcanizes in 55 minutes at 320 degrees Fahrenheit..

The price is $2.75 a pound.

A sample sheet will be sent for 20 cents, enough to give you an opportunity to learn its good qualities.

When you write, ask for our rates on quantities. They are lower than you think.

Our No. 1 Light Orange Rubber is a good thing for the busy dentist who cannot take much time packing his plate.

He can pack a plate with this rubber quicker than with the strong dark dental rubbers.

It is a beautiful light red in color, and is plenty strong enough for the regulation plate.

A combination of No. 1 Orange for the base and Maiden Blush Pink for the face would make a very pretty and attractive looking denture.

The price of this No. 1 is only $2.25 per lb.

A valuable booklet, with full description and samples of our rubbers vulcanized, will be sent free, if you mention this book.

Traun Rubber Co.,

Successors to Excelsior Rubber Works,

Factory, College Point, N. Y. **Office, 335 Broadway, New York City.**

Traun's Pink Dental Rubber.

There is just one thing which is essential in pink dental rubber—that is naturalness.

That is the perfect pink color which best imitates the natural gums.

Our pink rubber is the best pink rubber made in America—nay, it is the best pink rubber made anywhere, it is superior to even the best reputed and highest priced imported kinds.

When we say our Pink is superior in every way to any other pink rubber made, we mean just that. We are prepared to stand by this statement without hedging or qualification.

The main thing in pink rubbers is the life-like appearance. With our rubbers a good gum-like shade can be obtained, even without solarizing. A few hours' exposure to sunlight, however, always improves the delicate tints.

More than that, it is strong—comparatively. Many of our customers find it is strong enough to be used for the entire plate, an advantage that will be manifest to every dentist.

Other pinks cannot be so used—they are not strong enough. You must use them merely to give color to the face of the plate. You use stronger rubber for the base.

The advantage of working entirely in pink rubber, which is strong enough to make the entire plate, and which is natural enough to furnish a perfect color, will be appreciated by every true dentist who has his profession and success at heart.

That dentist needs to become acquainted with Traun's Pink Dental Rubber, unless he already knows it.

It is made in three colors, which supply every color needed by the dentist. These colors are the Ideal Pink, Imperial Pink, and Maiden Blush Pink.

The prices of these are as follows:

	Ideal Pink. Light Shade.	Imperial Pink. Deep Rose.	Maiden Blush Pink. Extra Light Shade.
Per Pound	$5.00	$5.50	$6.00
Half Pound	2.50	2.75	3.00

Perhaps you would like to see a sample of our Pink Dental Rubber before buying. We will send a sample sheet for thirty cents.

A catalogue with vulcanized samples of all our Dental Rubber free for the asking. Mention this book.

Traun Rubber Co.,

Successors to Excelsior Rubber Works,

Factory, College Point, N. Y. Office, 335 Broadway, New York City.

Price-List of Traun's Dental Rubbers.

	Per lb.	5 lbs. per lb.	10 lbs. per lb.	25 lbs. per lb.	50 lbs. per lb.
Traun's "Ideal," it makes Unbreakable plates	$2.75	$2.00	$1.75	$1.65	$1.50
No. 1. Light Orange	2.25	2.05	1.80	1.70	1.50
No. 2. Medium Orange	2.25	2.05	1.80	1.70	1.50
No. 3. Dark Orange	2.75	2.50	2.20	2.00	1.80
No. 4. Light Mottled	2.75	2.50	2.20	2.00	1.80
No. 5. Dark Mottled	2.75	2.50	2.20	2.00	1.80
No. 6. Maroon	3.00	2.70	2.40	2.20	2.00
Maroon A	2.75	2.00	1.75	1.65	1.50
No. 7. "Nubian" Black, the standard deep jet black	3.00	2.70	2.40	2.20	2.00
"Zulu" Black, jet black, superior to other makes offered at the same price	2.25	2.05	1.80	1.70	1.50
Pure Black	2.25	2.05	1.80	1.70	1.50
No. 9. White	4.50	4.00	3.60		
No. 10. "Giant," a colossus in strength	3.00	2.70	2.40	2.20	2.00
No. 12. Herakles, the only colored Non-Mercury Rubber	4.00	3.60	3.20	3.00	2.70

Traun's Pink Rubbers.

Traun's No. 8. Imperial Pink, deep Rose	5.50	5.00	4.50	4.25	4.00
Traun's No. 11. Maiden Blush Pink, extra light	6.00	5.40	4.80	4.50	4.25
Traun Ideal Pink, light shade	5.00	4.50	4.25	4.00	3.75
Traun's New "Columbia" Dental Rubber Featherbone	1.75	1.60	1.50	1.45	1.35

Traun Rubber Co.,

(Excelsior Rubber Works,)

Factory, College Point, N. Y. **Office, 335 Broadway, New York City.**

The S. S. White Dental Mfg. Co.'s Vulcanite Rubber.

	Per lb.	5 lb. lots.	10 lb. lots.	25 lb. lots.
Bow Spring Rubber	$2.75	$2.50	$2.25	$2.00
Dental Gum, No. 1, Improved	2.25		2.00	1.90
Pink and Pink A	5.00	4.75	4.50	
White	4.00			
Black	2.25			
Poulson's Pink	5.50			
Poulson's Shaded Pink, 1-5-lb. package				$1.50
Poulson's Shaded Crown Rubber, 1-5-lb. package				1.00
Poulson's Shaded Jet Black Rubber, 1-5-lb. package				1.00
Gears' Shaded Pink, 3 oz. packages				2.75
Gears' Shaded Pink, 1 oz. packages				1.25

Walker's Vulcanizable "Granular Gum" Facing.

No. 1	Mottled Granular Gum	per ounce $1.00
No. 2.	Purple Tint Dark Granular Gum	per ounce 1.15
No. 2A.	Purple Tint Light Granular Gum	per ounce 1.15
No. 3.	Florid Tint Dark Granular Gum	per ounce 1.15
No. 3A.	Florid Tint Light Granular Gum	per ounce 1.15

ESTABLISHED 1865.

....EUGENE DOHERTY'S....

NEW IMPROVED PINK RUBBERS.

I desire to state to the Profession that I manufacture three shades, LIGHT, MEDIUM LIGHT AND DEEP SHADE, which cannot be surpassed in quality, strength, shades or finish.

Dentists who have used my Pink Rubbers, speak highly of them and desire no other make.

All I ask is a trial and I am positive after a test of my Pink Rubbers has been made, they will prove their superiority over all others.

The desirable qualities of my Pink Rubbers are color and toughness.

To test this fact, the cost is not great and the experiment worth making to Dentists using this variety of Rubber.

My Pink Rubbers are the nearest approach to the Natural Gum as yet on the market.

They are of superior quality, possess a strength unknown in other makes, are more natural in appearance and warranted to give entire satisfaction.

During my 35 years experience as a manufacturer I have certainly turned out the highest product of dental rubbers, that has ever been put on the market and I have earned this reputation among dentists the world over.

Eugene Doherty's Rubber Dam

Excels all other makes,——manufactured from carefully selected Rubber under the most improved processes, superior in quality, strength and finish, no smell, no rot, warranted to last for years without deteriorating.

Dentists using this Dam once want no other. All I ask kfor it is a trial, the Rubber Dam will do the rest.

To those who have not used my Dam it will pay them to give it a trial as I am positive it will prove its superiority over other makes.

I desire to state to the Profession that my Dam is *ordorless,* its sterling qualities are strength and durability, it gives the best satisfaction, no dentist can afford to be without it.

Give it a trial and see for yourself.

☞ **The two following Pages treat on my Rubbers.**

EUGENE DOHERTY,

110 & 112 KENT AVENUE, BROOKLYN, N. Y., U. S. A.

DENTAL RUBBERS.

TWIN CITY RED RUBBER.

This Rubber is the best that can be made, regardless of cost, making a plate as tough and springy as Pure Para, and of a dark red shade. It takes the lead today in our sales, and gives absolute satisfaction wherever it has had a trial.

PRICES.

Per lb	$3.00
Per 5-lb. lots	2.75
Per 10-lb. lots	2.25

PHOENIX RED RUBBER.

This Rubber is made in two shades of Orange (light and dark); the dark will always be sent when color is not specified.

This Rubber is equal to many of the best on the market, and can be depended upon to make good work.

PRICES.

Per lb	$2.50
Per 5-lb. lots	2.25
Per 10-lb lots	2.00

TWIN CITY MAROON RUBBER.

PRICES.

Per lb	$3.00
Per 5-lb. lots	2.75
Per 10-lb. lots	2.25

PHOENIX BLACK RUBBER.

This is a jet black Rubber of a superior quality. In the years this Rubber has been on the market it has never in a single instance failed to meet the requirements.

PRICES.

Per lb	$2.25
Per 5-lb. lots	2.00
Per 10-lb. lots	1.75

PATTERSON'S NEW RUBBER.

This is a medium red Rubber, by a new process. Makes good plates.

PRICES.

Per lb	$2.00
Per 5-lb. lots	1.75
Per 10-lb. lots	1.50

TWIN CITY PINK RUBBER.

This Rubber is an imported Rubber, from the very best German laboratories; the shade is not equalled by any other make. It has the required strength, and the sales since we introduced it, eight years ago, have been enormous.

Put up in ½ lb. boxes.

PRICES.

Per lb	$6.00
Per 5-lb. lots	5.75
Per 10-lb. lots	5.50

PHOENIX PINK RUBBER.

Is a good Rubber where something cheaper is wanted. Color and strength are equal to the expectations of many uses.

PRICES.

Per lb	$5.00
Per 5-lb. lots	4.75
Per 10-lb. lots	4.50

PHOENIX RUBBER DAM.

This is our leader, and is always sent when no other is specified.

Put up in ½ and 1 yard rolls, 5 and 6 inches wide, always fresh and of uniform quality.

Medium only, 6 inches.....per yard	$1.75
Medium only, 5 inches..... "	1.50

SOME OF THE LEADING DENTAL RUBBERS

MANUFACTURED BY

CLAUDIUS ASH & SONS LIMITED.

These World-famed Dental Rubbers are made from the purest and strongest materials.

Whalebone No. 1.

Gum-Pink. Light.

New Pink.

Dark Elastic.

No. 1 x.

Orange.

English Pink. Light.

Gum-Pink. Medium.

Improved Black.

English Pink Medium.

No. 1 Pink.

English Base.

CLAUDIUS ASH & SONS LIMITED.

30 and 32, East Fourteenth Street.

NEW YORK.

Pawson & Bradsford Lith. Sheffield.

ASH'S HIGH GRADE

DENTAL RUBBERS.

We draw the attention of the profession to those of our Rubbers in Color shown on preceding page. We have selected these from our full list as the ones more generally used in the United States.

THE GUM PINK — Is by far the strongest pink that has yet been produced, and more nearly resembles the color of the human gum than any in the market.

THE ENGLISH PINK — Is the superior of any rubber at same price.

THE DARK ELASTIC — Contains no coloring matter and is the strongest base rubber made, one pound being equal in bulk to one and a half pounds of colored rubber.

THE ORANGE, ENGLISH BASE AND IMPROVED BLACK — Are universally esteemed for their general excellence and can always be relied upon for uniformity in strength, color and purity.

Full list of all our Rubbers supplied on application.

RETAIL AND QUANTITY RATES:

	Per lb.	5 lb. lots.	10 lb. lots.	20 lb. lots.	25 lb. lots.
Gum Pink Light, -	$6 00	$5 40	$5 00	$4 70	$4 50
" Medium,	6 00	5 40	5 00	4 70	4 50
New Pink, - -	6 00	5 40	5 00	4 70	4 50
No. 1 " -	6 00	5 40	5 00	4 70	4 50
No. 1X " - -	6 00	5 40	5 00	4 70	4 50
English Pink Light,	5 00	4 75	4 50	4 00	3 75
" Medium,	5 00	4 75	4 50	4 00	3 75
Whalebone No. 1, -	4 00	3 60	3 20	3 20	3 20
Dark Elastic, -	3 50	3 15	3 00	3 00	2 80
Orange, - - -	3 00	2 70	2 50	2 40	2 40
Imp. Black, - -	3 00	2 70	2 50	2 40	2 40
English Base, - -	2 50	2 25	2 25	2 00	2 00

C. ASH & SONS, LTD.,
30 EAST FOURTEENTH STREET, NEW YORK.

Quantity rates apply to MIXED lots of our Rubbers.

ESTABLISHED 1865.

...SAMSON RUBBER...

ONLY
ONE
BEST
RUBBER

TRADE MARK
No. 3788.

REGISTERED
June 20, 1876.

PRICE LIST.

PINK RUBBER, LIGHT SHADE,	per pound	$5.00
PINK RUBBER, MEDIUM LIGHT SHADE,	" "	5.00
PINK RUBBER, DEEP SHADE,	" "	5.00
In 5 pound lots, per pound		$4.50
In 10 " " " "		4.25

Samson Rubber, per lb		$2.75
In 5 pound lots, per pound		$2.50
In 10 " " " "		2.25
In 25 " " " "		2.00
In 50 " " " "		1.80
Maroon Rubber, per lb		2.75

No. 1 Rubber, per pound		$2.25
Mottled Rubber, " "		2.25
Pure Black " " "		2.25
No. 2 Rubber, per pound		$2.25
Jet Black Rubber, "		2.25
Para Black " " "		2.25
Gutta Percha, Base Plate, pink or white, per pound		$2.25
In 5 pound lots, per pound		$2.00
In 10 " " " "		1.90
In 20 " " " "		1.80
In 40 " " " "		1.70

Doherty's New Ideal Dental Rubber, per pound, $1.75.

In 5 pound lots, per pound.....$1.60

Red Vulcanizable Gutta Percha, per lb	$3.00	Flexible or Palate Rubber, per lb	$3.00
No. 1 Weighted Rubber, " "	3.50	No. 2 Weighted Rubber, " "	3.50
Black " " " "	3.50	15 Minute Rubber, " "	2.50

My Rubber Dam is put up in rolls, 6 inch wide by 18 feet long, one square yard, and 6 inch wide by 9 feet long, one half square yard.

Medium Rubber Dam, per yard roll	$1.65
Medium Rubber Dam, per half yard roll	.83
Thin Rubber Dam, per yard roll	1.15
Thin Rubber Dam, per half yard roll	.58

EUGENE DOHERTY,

110 & 112 Kent Avenue, BROOKLYN, N. Y., U. S. A.

Doherty's New Improved Pink Vulcanizable Gutta Percha for Coating.
PRICE, $6.00 PER POUND.

ESTABLISHED 1865.

ONLY ONE BEST RUBBER.

IN every line of business in the world, there is only one best manufacturer. There were never two "bests," and there never will be.

There is just one make of dental rubber that is better than all the others

That is the Strongest and Toughest.
That never varies in Quality.
That takes the Highest Polish.
That is Easiest for the Dentist to Pack.
That Rubber is

No. 3788. Registered June 20, 1876.

SAMSON RUBBER.

I have made Samson Rubber for over 24 years. I know exactly what it is and what it will do. I know the Para Rubber of which it is made is the most carefully selected. I know the process by which it is manufactured is used by me only, and I know that process is best.

No dentist can afford to use rubber that is a shadow short of the best. No dentist can afford to take any chances.

Samson Rubber costs no more than ordinary grades, but is worth a great deal more. If you have used it, you know all these words are true. If you have not used it, you are asked to try it. Never mind what other makers say. Never mind what I say. Simply try Samson Rubber and let it recommend itself.

I make every variety of Rubber that a dentist needs. No. 1 Rubber is a light red, uniformly tough and strong, and will give perfect satisfaction.

My Pure Black, Jet Black and Para Black Rubber contain not an atom of mercury. The quality is unmatchable anywhere.

My Weighted Rubber mixed with pure metal, for lower sets, is considered the finest in the world.

Doherty's New Improved Vulcanizable Gutta Percha.

My Red Vulcanizable Gutta Percha which I have made for the last 30 years, is cleaner and cooler in the mouth than Rubber, food does not collect on it, nor does it become slimy.

My Pink Vulcanizable Gutta Percha for coating, I believe to be superior to anything yet on the market for this purpose.

EUGENE DOHERTY,

110 & 112 Kent Avenue, BROOKLYN, N. Y., U. S. A.

The Vulcan Gold Lining.

A Perfect Gold Covering for Rubber Plates.

The gold is applied in one piece to the surface to be covered, and no extra care is required in packing the flask. The lining is composed of chemically pure gold with a thin covering of pure silver.

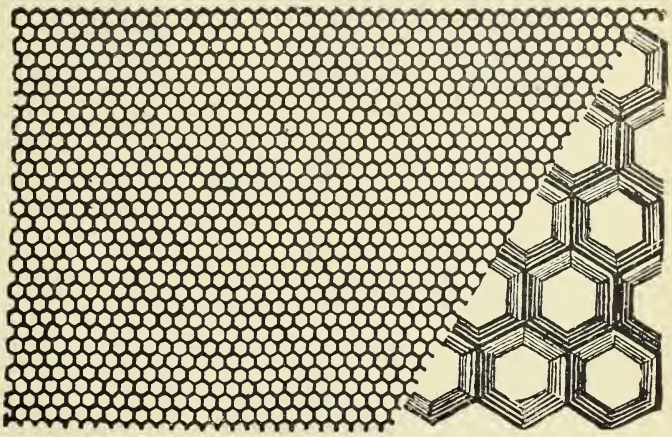
The sheets are the thickness of No. 20 foil, and each book contains about forty-eight (48) square inches—more than enough to cover six ordinary size plates on one side, or four plates on both sides.

Price, per package..... $5.00

Combination Dentures.

This is a perforated metal plate, by the use of which, in combination with rubber dental plates may be made much thinner than if made of rubber only. The cut shows the full size of the plates. A part of the plate on the right shows the perforations as they appear under a strong magnifier.

Each box of plates will contain full directions with illustrations of their application to whole and partial dentures.

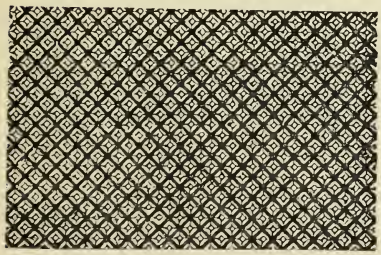


No. 1. Aluminum Plates, each 35 cents; per box of six..... $2.00
No. 2. Victoria Metal Plates (gold colored), each 60 cents; per box of six..... 3.50

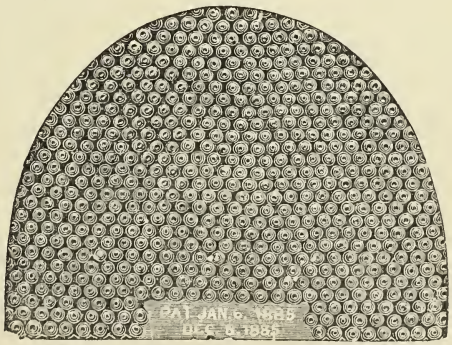
Dr. Wunsche's Metal Adhesion Plates.

These plates are of very strong, white metal, enabling the dentist to dispense with the vacuum-chamber in upper dentures, besides adding very much to the strength of the case. Each box will contain full directions.

Price, per box of six ....25 cents.
Price, each .... 5 cents.



Surface-Cohesion Forms for Artificial Dentures.



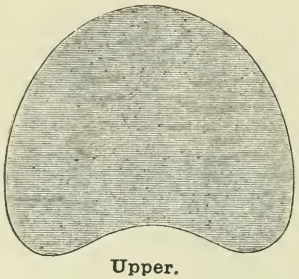
No. 1.

A thin metallic form, the surface of which is covered with minute papilli-form prominences—shown in Fig. 2 magnified four diameters—effect surface cohesion as if the denture were glued to the gums, yet cause no irritation and leave no marked indentations. Strong cohesion can be had with a narrow plate, the sense of taste left unimpared. Full directions accompany each package.

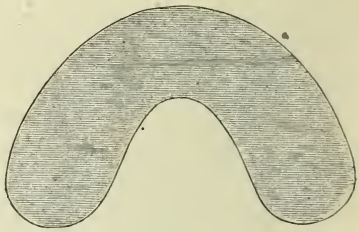
Price, per box, containing one dozen Forms, 25 cents. Rubber Cement, per bottle, 25 cents.

These forms are also made of gold with a thin lining of silver, similar to our Vulcan Gold Lining, and for like use. Thickness of No. 120 foil. Price, each, $2.50.

Spyer's Adhesive Plates.



Upper.



Lower.

With the use of these plates dentures can be fitted and comfortably worn in mouths that would not hold a hard rubber plate, that are tender, or in which the gums are spongy.

Full directions accompany each package.

PRICES.

No. 1. Box contains 3 upper and 3 lower plates.....$1.00
No. 2. Box contains 6 upper..... 1.00
No. 3. Box contains 6 lower..... 1.00

Spyer's Automatic Suction Cavity.

FIG. 1.

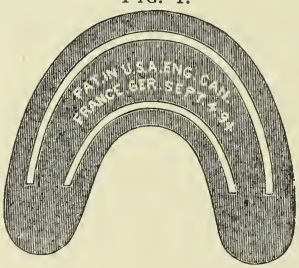


FIG. 2.

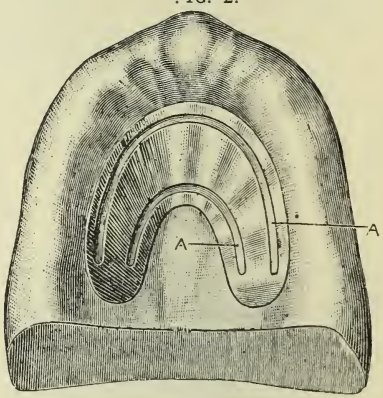


Fig. 1 is a view of Spyer's Automatic Suction Cavity ready for use. Fig. 2 shows it in position on the plaster model.

The Automatic Suction Cavity is furnished already shaped for the model; it is only necessary to trim it to meet the requirements of each case, always leaving a slight space between the slots or openings, AA, Fig. 2, and the outer margin of the metal form.

Secure the cavity by means of pins or mucilage to the plaster model on the palatal surface inside of the alveolar ridge, leaving the ridge uncovered.

Cover the metal form with the wax base-plate, which should be of the size, and approximate the form of the finished plate. Upon the base-plate the teeth are set up as usual, and the case flasked, packed, and vulcanized in the usual way.

The finished plate will have along the edge of its palatal surface two ridges, besides the form of the vacuum, which provides strong adhesion from end to end of the plate.

After vulcanizing, remove the metal form. If the ridges are too high, file them down to the desired height.

Each box contains 12 Automatic Suction Cavities.

Price ..... per box $0.50

Scott's Plate Retainers.

These Retainers have been used very largely as a means of retaining the plate in the mouth by means of suction.

PRICES.

Per box of 1 dozen, upper.....$2.00
Each ..... .20

Celluloid Plates.

PRICES.

Uppers	Nos.	3	3½	4	4½	5	5½	6	6½
	Price,	$0.16	.20	.18	.22	.22	.25	.27	.29
Uppers, "A,"	Nos.	3	3½	4	4½	5	5½	6	6½
	Price,	$0.23	.24	.24	.28	.30	.30	.39	.44
Lowers	Nos.	1½	2	2½	3	3½	4	4½	
	Price,	$0.12	.13	.16	.15	.21	.21	.26	
Plumpers	Nos.	3	4	5	6				
	Price,	$0.27	.36	.43	.35				
Partials	Nos.	5	6	7	8	9	10		
	Price,	$0.08	.10	.13	.16	.14	.18		

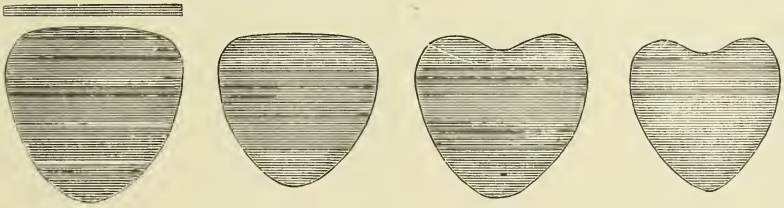
Liquid Celluloid.

Per (1 ounce) Bottle $0.25

Tin Foil No. 60, for Celluloid Work.

Per Book $0.60

Metallic Air Chamber Patterns.



1 2 3 4

Each form of our Air Chamber Patterns is made in 3 thicknesses affording a choice of 12 styles. They are put up in boxes containing a dozen each, either of separate numbers or assorted.

We also supply two additional forms: No. 5 acorn shape and No. 6 shield shape.

Price, Thin and Medium..... per dozen, $0.15
Price, Thick..... per dozen, 0.20

Air Chamber Metal.

Cut in strips 1x15 inches, gauges B. and S. Nos. 14 to 18.

Price..... per pound $0.25

Plate Brushes.

Bone Handles. Two Grades, Medium and Stiff.

Three Rows ..... each $020
Four Rows ..... each .30
Five rows..... each .40

Rubber Scrubbers.

Each $0.30

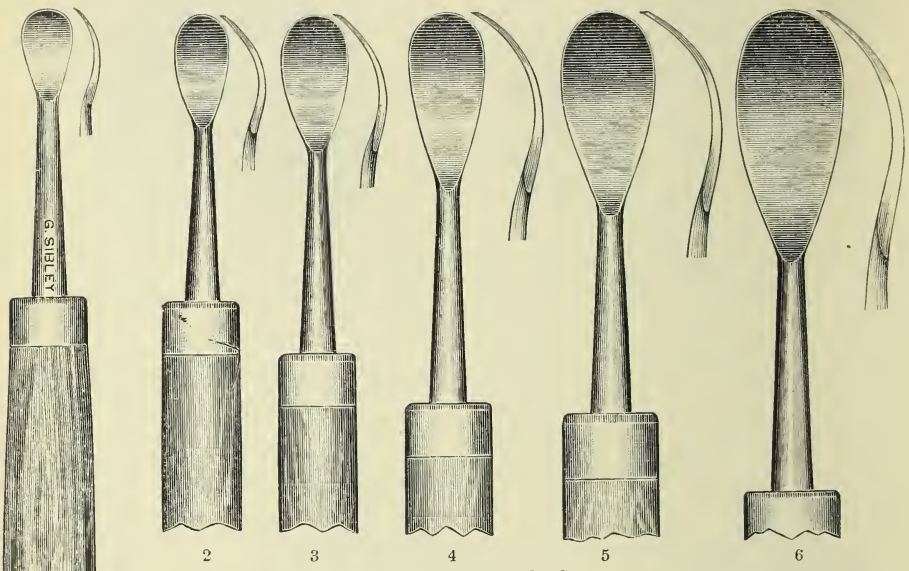
Artificial Plate Brush.

This Brush is made of the best Russian bristles, fastened with brass wire. The back is left open to permit the free drainage of water, thus keeping the Brush in good condition.

It is especially designed for the needs of wearers of dental plates, but will be found very useful in the laboratory.

Price..... per doz., $4.00; each, $0.35

Kingsley Vulcanite Finishers.



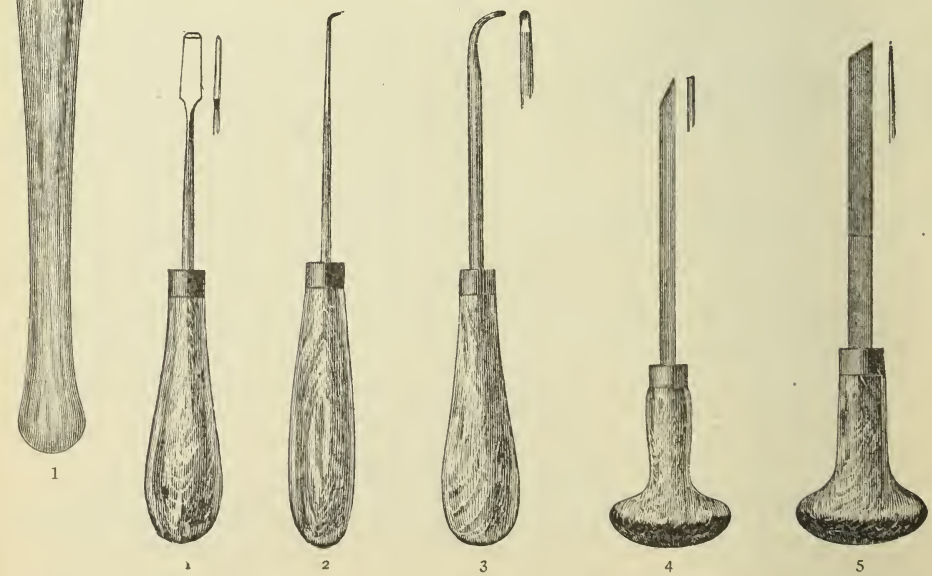
2 3 4 5 6

PRICES

Fine Handles, Smooth Shouldered Joints.....each $0.50
With Driven Blades, as illustrated.....each .30

Vulcanite Packers.

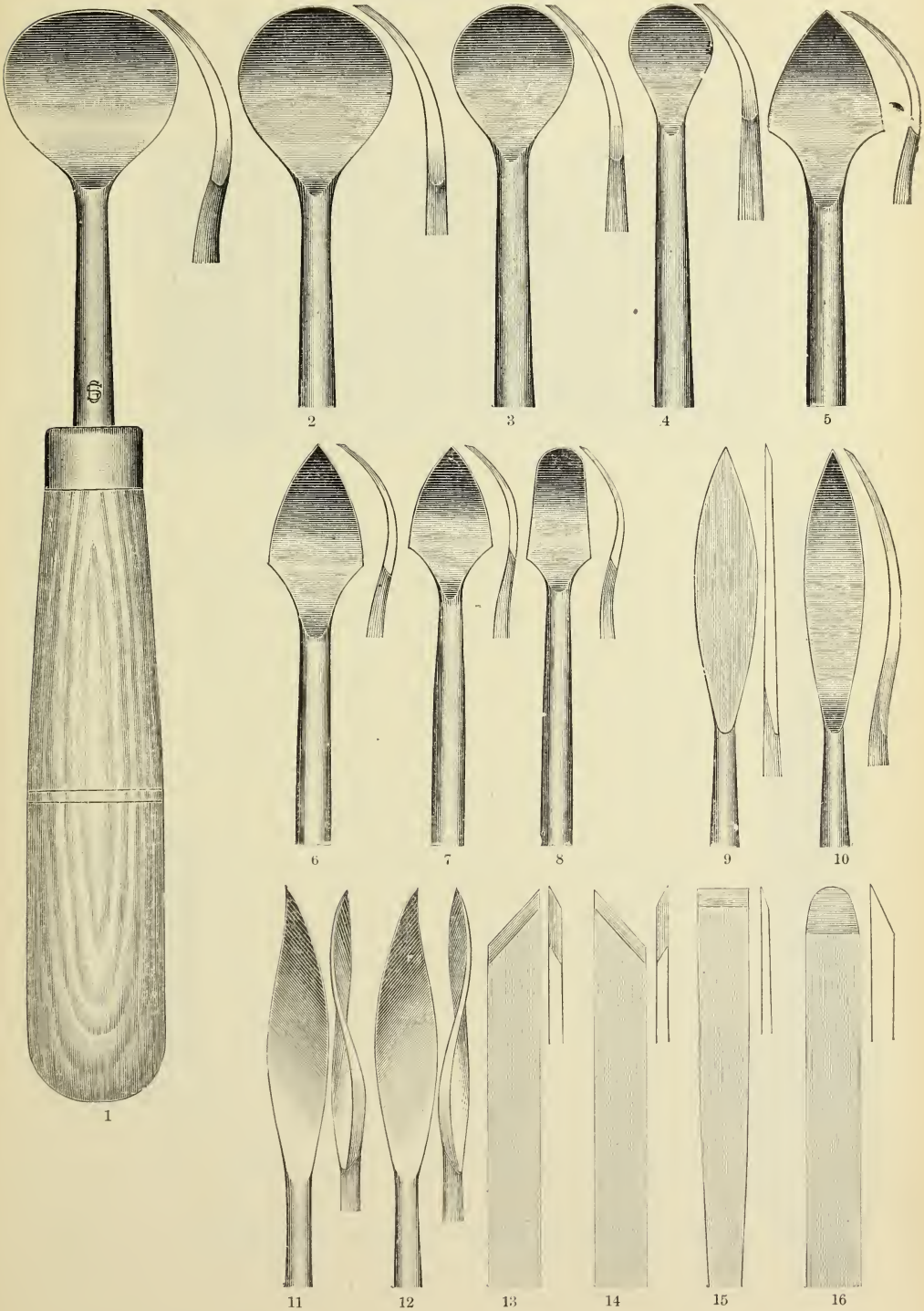
Set of Five.



1 1 2 3 4 5

Price .....each $0.25

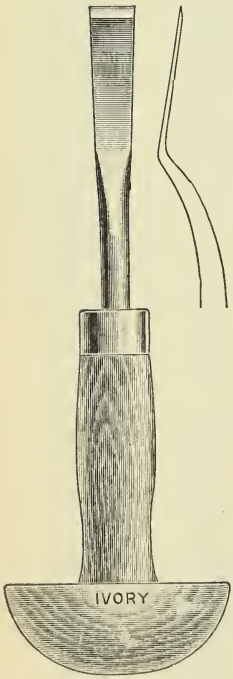
Vulcanite Scrapers.



Light Wood Handles.....each $0.25

The Pearson Chisels.

Designed by Chas. E. Pearson.

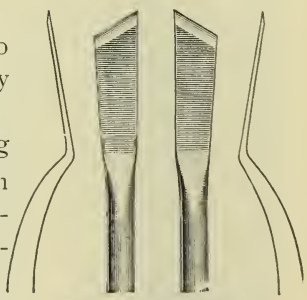


Here is a chisel that is full of good features. The Handle, made as it is, will appeal to you, as it fits the palm of the hand, and is so easily grasped. The curvature of the blade is such that no awkward position is necessary in carving around the teeth. This curvature, combined with the right and left angles of the cutting edge, makes it of no difficulty at all to trim on either side of the lingual surface of the plate. As you will notice in the cuts, the same curvature is found in the square end Chisel, too.

The old style Chisels offer you no conveniences; these Chisels embody ALL.

The use of these Chisels in trimming but one denture will create such an attachment for them that they will always hereafter be found in your laboratory.

(Three in Set.)

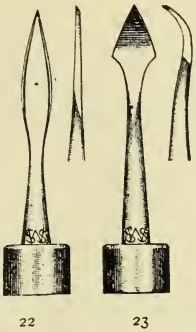


Made in Right, Left and Straight Edge.

Price, each.....30 cents.

J. W. IVORY, 51 North Tenth St., Philadelphia.

21



22 23

Fine Vulcanite Finishers.

These three forms of Vulcanite Finishers afford facilities for fine work not found in the larger sizes, and they are accordingly added to our set. They have been well thought out, and as they are made are excellent tools. No. 21 is a thin narrow chisel for paring the labial surfaces, margins, and edges of a vulcanite (or cast) plate. No. 22 is a pointed side-cutting tool for carving smoothly between the teeth; the parts most difficult to shape and finish. No. 23 is for palatal and generally efficient work. Finely finished; the handles like those made for the Kingsley Finishers for years, to afford a firm, non-cramping grasp. Taken all together, this finishing set will be found to pleasingly supplement the preparatory work of the burs, files, and scrapers.

Price ....each $ .30

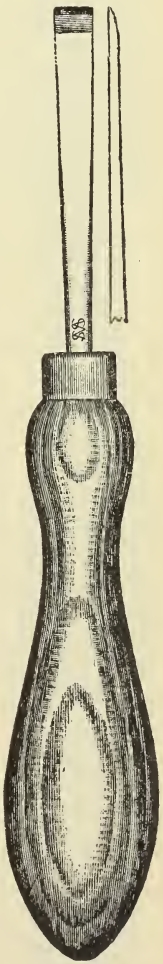
Vulcanite Carver Chisel.

Added to our Set as No. 24.

In carving of vulcanite dentures for the production of artistic effects, smaller forms of Chisels are found to be preferable to larger sizes. They allow of a delicacy of manipulation impossible with a large instrument, on account of the perfect control of the smaller blade.

The Chisel Carver here illustrated is an excellent example. With it the most accurate paring and shaving of the vulcanite is readily accomplished. The cutting edge has a two-step bevel to facilitate clearance. Made in the best style. Apple-wood handle.

Price ....each $ .30



No. 24.

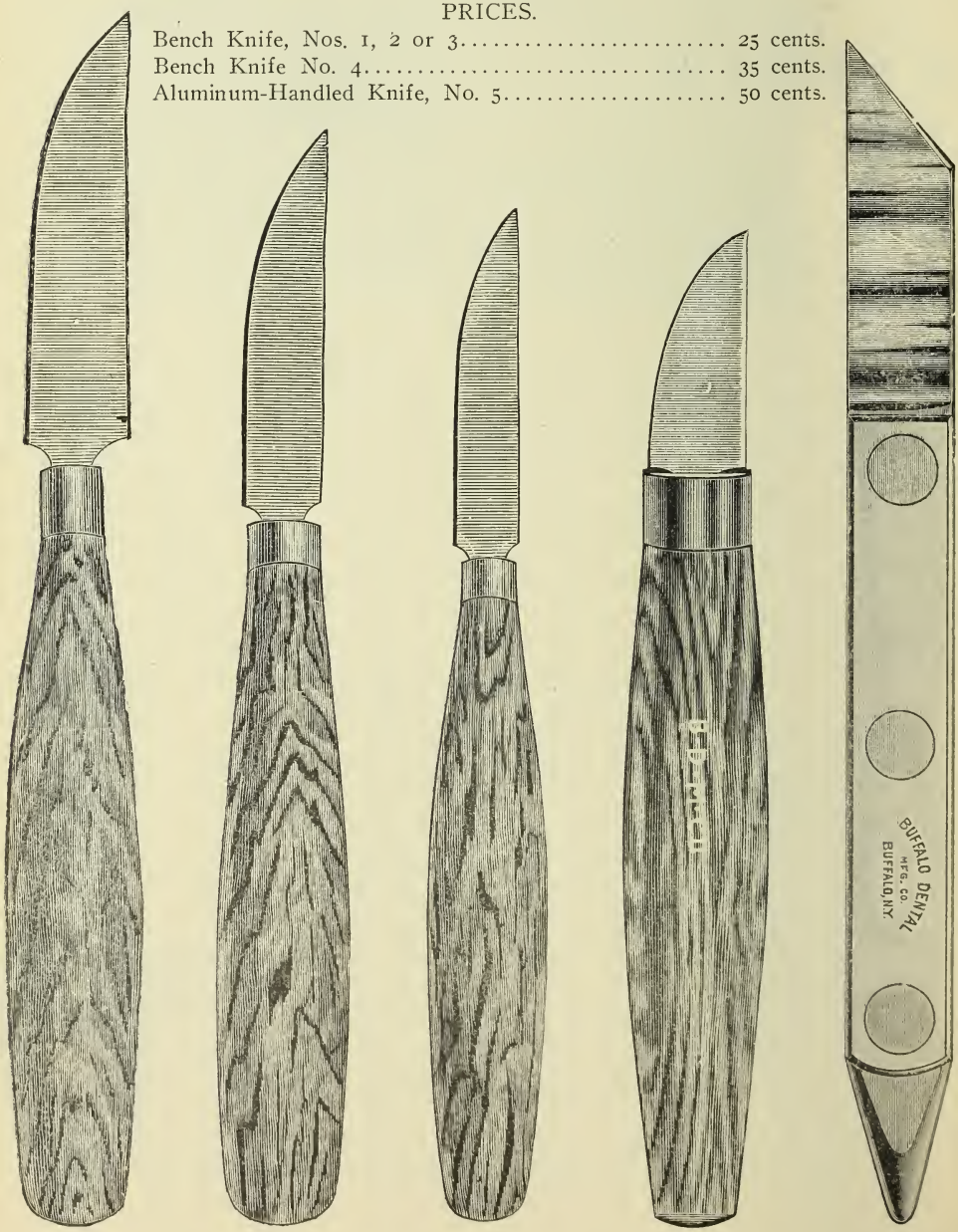
Bench Knives.

These knives are of good material, rosewood handles, tempered steel blades, and excellent in shape for trimming plaster casts, and for dental laboratory purposes generally.

Aluminum-Handled Bench Knife No. 5. This knife is made from one piece of steel, and is very strong and well tempered. One end is tapered and thinned for removing plaster impressions from the casts.

PRICES.

Bench Knife, Nos. 1, 2 or 3	25 cents.
Bench Knife No. 4	35 cents.
Aluminum-Handled Knife, No. 5	50 cents.



1 2 3 4 5

Litterst Hand-Cut Files.

These files are made of the best imported steel, and are cut by hand. This firm has been making a specialty of dental files since 1851.

PRICES.

	Each.	Doz.
Separating, No. 00, 0, ½, 1, 2, 3, 4, 5, 6, 7, 8	$ .10	$1.00
Separating, No. 000, narrow and wide	.12	1.25
Separating, No. 000, 00, 0, 1, ½; draw cut	.12	1.25
Plug Finishing, 12 styles; very fine to very coarse	.15	1.80
Double End Plug Finishing, 30 styles	.20	2.40

Vulcanite Files.

	Inches.	Each.	Doz.
Double End Half Round,	7	$ .20	$2.40
Double End, Half Round	8	.25	3.00
Double End, Half Round	9	.28	3.25
Fishbelly, or Double End Oval	7	.28	3.25
Fishbelly, or Double End Oval	8	.30	3.45
Fishbelly, or Double End Oval	9	.32	3.80
Half Round, with tongue for handle	4½	.14	1.65
Half Round, with tongue for handle	5¼	.16	1.92
Half Round, with tongue for handle	6	.20	2.32
Half Round, with steel handle	4½	.16	1.92
Half Round, with steel handle	5¼	.18	2.08
Half Round, with steel handle	6	.20	2.40
Rat Tail, or Round	4	.14	1.65
Rat Tail, or Round	5	.15	1.80
Rat Tail, or Round	6	.16	1.92

THE LITEREST COMPANY,
Menlo Park, N. J.

Files for Vulcanite Work.

PRICES.

A. Half Round, with Tang for Wood Handle.

	Each.	Per Doz.
4½-in	$0.18	$2.00
5¼-in	.22	2.50
6-in	.25	2.75

B. Double End, Half Round.

	Each.	Per Doz.
7-in	$0.26	$3.00
8-in	.30	3.50
9-in	.32	3.75

Half Round, Steel Handled.

	Each.	Per Doz.
4½-in	$0.22	$2.50
5¼-in	.24	2.60
6-in	.26	3.00

C. "Fish Belly," Half Round.

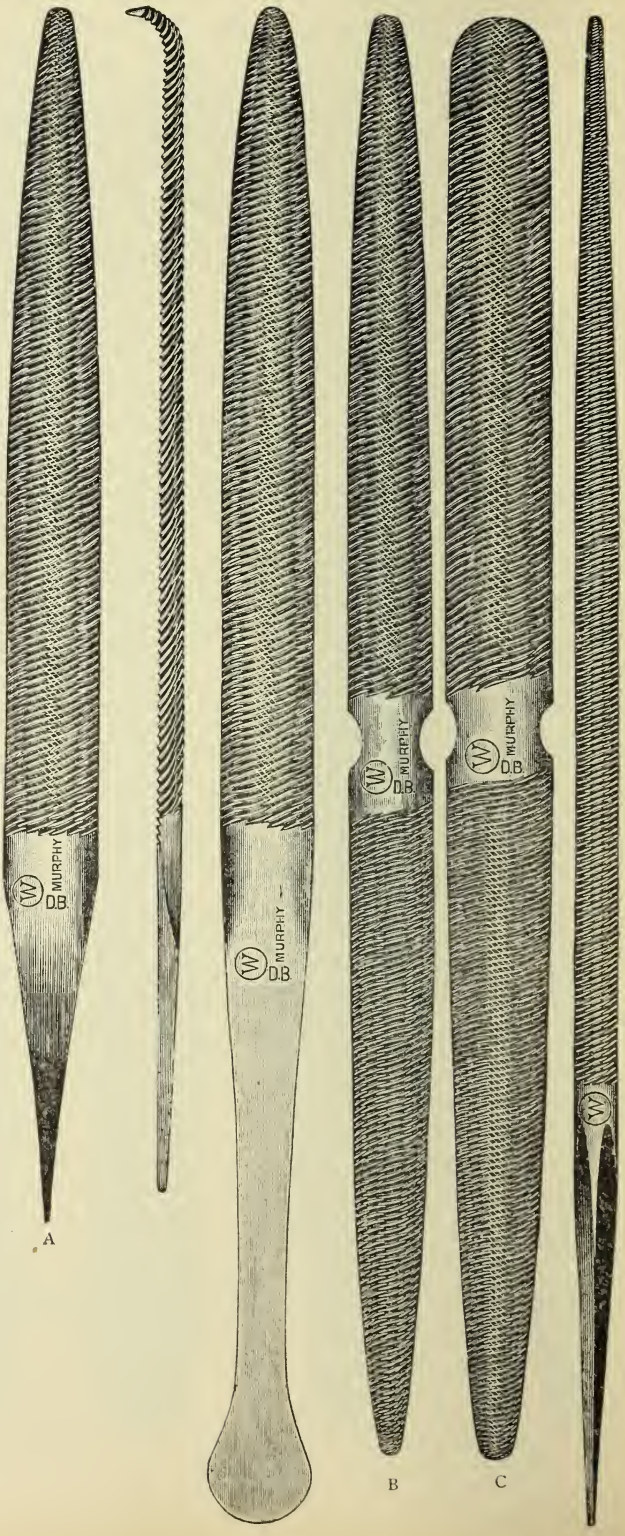
	Each.	Per Doz.
7-in	$0.32	$3.75
8-in	.35	4.00
9-in	.40	4.50

Half Round, Scraper Point with Tang.

	Each.	Per Doz.
4½-in	$0.22	$2.50
5¼-in	.25	2.75
6-in	.26	3.00

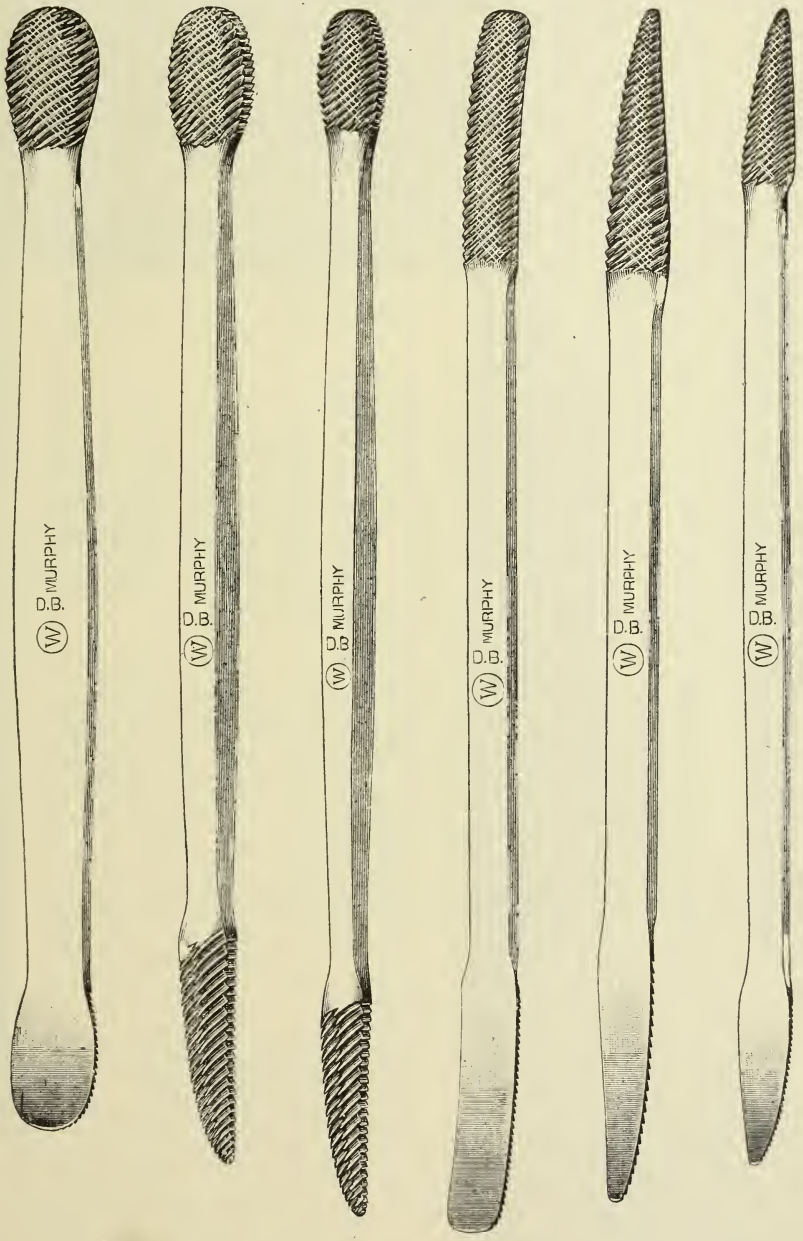
Rat-Tail.

	Each.	Per Doz.
4-in	$0.18	$2.00
5-in	.20	2.25
6-in	.22	2.50



Double End Files for Vulcanite Work.

The Cuts show the forms of these Files.



1 2 3 4 5 6

Nos. 1, 4. 5 and 6 are cut on one side of each end.
Nos. 2 and 3 are cut on all sides of the end.
Nos. 1, 4, 5 and 6 are half oval.
Nos. 2 and 3 are full oval.

Price, each 25 cents; per doz.....$2.75

We can supply any grade of Plaster that is made—we carry in stock nothing but French's Selected. There is no question about this being the best in the world. In this particular case there is no economy in using anything short of the best.

Plaster is the only article in our stock sold over eastern prices. We will sell Plaster at New York and Philadelphia prices if shipped from the mills direct to the buyer. Twenty-five cents for cartage is added to these prices if plaster is sent from our depots by freight.

PRICES.

Barrel	$6.50
Half-Barrel	3.50
Quarter-Barrel	2.25
Twelve Quart Can	1.50
Six-Quart Can	.90

Spatula or Palette Knife.

Plaster Spatulas.

No. 17.	Spatula or Palette Knife, with Patent Bolster, 4-in	$ .25
No. 18.	Spatula or Palette Knife, with Patent Bolster, 5-in	.30
No. 19.	Spatula or Palette Knife, with Patent Bolster, 6-in	.40
No. 19½.	Spatula or Palette Knife, Sq. End, with Patent Bolster, 4-in	.30

Champion Compound.

For Impressions, Investments and Making Metal Dies.

Made by Gideon Sibley.

This is a substitute for Plaster in all cases, yet possessing a number of advantages all its own. It has had a large sale for some years (the Wilmington Dental Mfg. Co. formerly made it), and despite the appearance in the market since of many similar preparations, the demand for Champion Compound has increased with the demand for good Crown and Bridge Work. It is admirably adapted for all kinds of metal work.

Price per can, about 4 pounds ..... 50 cents.

Modeling Compound.

Made by Gideon Sibley.

This preparation ranks among the highest of the Impression Materials, and by a vast number of dentists is preferred to any other. With Sibley's Modeling Compound you can secure a perfect impression and a smooth model. It hardens quickly in the mouth and has a delicate and pleasant perfume.

Put up in ½ pound poxes; price per pound..... 75 cents.

Fowler's Pink and Yellow Wax.

For Base Plates.

Made by Gideon Sibley.

Probably but few dentists will be found at home or abroad who have not a favorable acquaintance with these Waxes. They have been in the market for more than fifteen years, and are pure, dainty and reliable.

Fowler's Pink Wax, sheets, per pound	$1.00
Fowler's Yellow Wax Sheets, per pound	1.00

Sibley's Sticky Wax.

For putting impressions together, mending plaster casts, sticking teeth to the plate—especially in metal work—mending rubber dam, sticking it to the tooth or gum for attaching the porcelain to the gold in crown and bridge work, etc., etc.

Price per box, in sticks	$ .50
Crown Sticky Wax, per box	.50

Rubber Bowls.

For Mixing Plast

Made by Gideon Sibley.

These Bowls are made of soft vulcanized rubber thick enough to give all the strength and rigidity required. They cannot be broken; their sides can be pressed together to form a lip for pouring thin-mixed plaster; and any unused plaster which sets in them can be thoroughly crushed and removed by squeezing the sides together.

A is 3¼ inches in diameter at the top by 2¼ inches in depth; B, 4 inches in diameter by 2¾ inches in depth; and C, 4½ inches in diameter by 3½ inches in depth.

Rubber Plaster Bowl, A	each	$ .50
Rubber Plaster Bowl, B	each	.60
Rubber Plaster Bowl, C	each	.80

Excelsior Cast Varnish.

This is not a new preparation. It has been made for twenty-five years. It has never been advertised, but the sale of it has increased steadily.

It prevents the plaster adhering to Vulcanite or Celluloid plates. It makes the cast hard, more dense and less liable to crumble or break.

The bottle contains nearly double the quantity of other varnishes, and sells at the same price.

Price, per 4-oz. bottle with brush . . . . . $ .25

Lee S. Smith & Son, Makers,

Pittsburg.

Miscellaneous Coatings for Plaster Casts.

Collodion, in 2-oz. bottles, with brush	per bottle	$ .40
Collodion, in 6-oz. bottles	per bottle	.80
Copal-Ether Varnish	per bottle	.25
Sandarac Varnish, in 2-oz. bottles	per bottle	.25
Extra Shellac Varnish, in 2-oz. bottles	per bottle	.25
Liquid Silex, in 2-oz. bottles, with brush	per bottle	.20
Elliott's Parting Fluid	per bottle	.25
Gilbert's Imperial Varnish	per bottle	.25

Camel's Hair Brushes, for use with above . . . . . each, $ .05; per doz., $ .50

Modelling Compounds.

Modeling compound is cleaner than plaster. A good many dentists prefer it to either wax or plaster and use it exclusively.

We handle the best kinds.

PRICES.

Jno. Hood & Co.'s, per lb. $0.75
Put up in ½ lb. boxes.
Four grades: Extra Soft, Soft, Medium and Hard.
C. Ash & Sons, per lb. $1.25
Put up in ½ lb. boxes.
S. S. White Dental Mfg. Co.'s, per lb. $0.75
In 10 lb. lots, per lb. ..... .65
Put up in ½ lb. boxes. In medium grade only.
Manifique—made by H. D. Justi & Son, per pound $1.25
Put up in ½ lb. boxes.

Modelling Composition for Base-Plates.

The easy manipulation of Modelling Composition and its rigidity early suggested to Dr. W. S. Elliott its use for base or "trial" plates, for which purpose it proved to be particularly well adapted.

We put it up for this purpose in oblong sheets 5¾x3 in.

Price, in half-pound boxes ..... per box $0.63

Dr. Melotte's Moldine.

For taking impressions of one or two teeth or roots, Dr. Melotte's Moldine used with Impression Tray No. 20 is excellent. Moldine is also useful in several other directions, notably as an investment for soldering or repairing plates.

Price, per ½-lb. $0.40

Highly Improved Patent Articulating Paper.

This Paper is very useful in articulating sets of teeth and crown fillings. By its use the operator is enabled to mark the bite and know just where to grind off the surface. It is free from oil, smell and taste.

Put up in books, each containing one dozen leaves, thick or thin.

Price, per book $0.08

The Ideal Dental Base-Plate.

DOES NOT "CRAWL" FROM THE CAST NOR SOFTEN UNDER THE HEAT OF THE MOUTH.

"Ideal" in every way. Fancy a trial plate that will not soften with heat of the mouth. Fancy a trial plate upon which teeth may be mounted and the plate worn in cases of emergency for a week or so at a time. Then you have the "Ideal" Dental Base Plate. There isn't anything could replace it. If it is used once it is used always.

Price per box of 12 sheets, 3½x2½ inches ..... 50 cents.

Wax Preparations for Impressions.

Impression Wax. Put up in half-pound boxes.

White Wax ..... per box, $.60
Yellow Wax ..... " .38
Gutta-Percha and Wax ..... " .63
White Paraffine and Wax ..... " .50
Pink Paraffine and Wax ..... " .50
Dainty Wax ..... " .60
Wax for carding teeth ..... per lb. $0.75
Articulating Wax ..... per lb. 1.00

Wax Preparations for Base-Plates.

Base-Plate Wax. Put up in half-pound boxes.

Yellow Wax ..... per box, $0.50
Gutta-Percha and Wax ..... " .63
Pink Paraffine and Wax ..... " .50
Pink Wax, Extra Tough, stick form ..... " .50

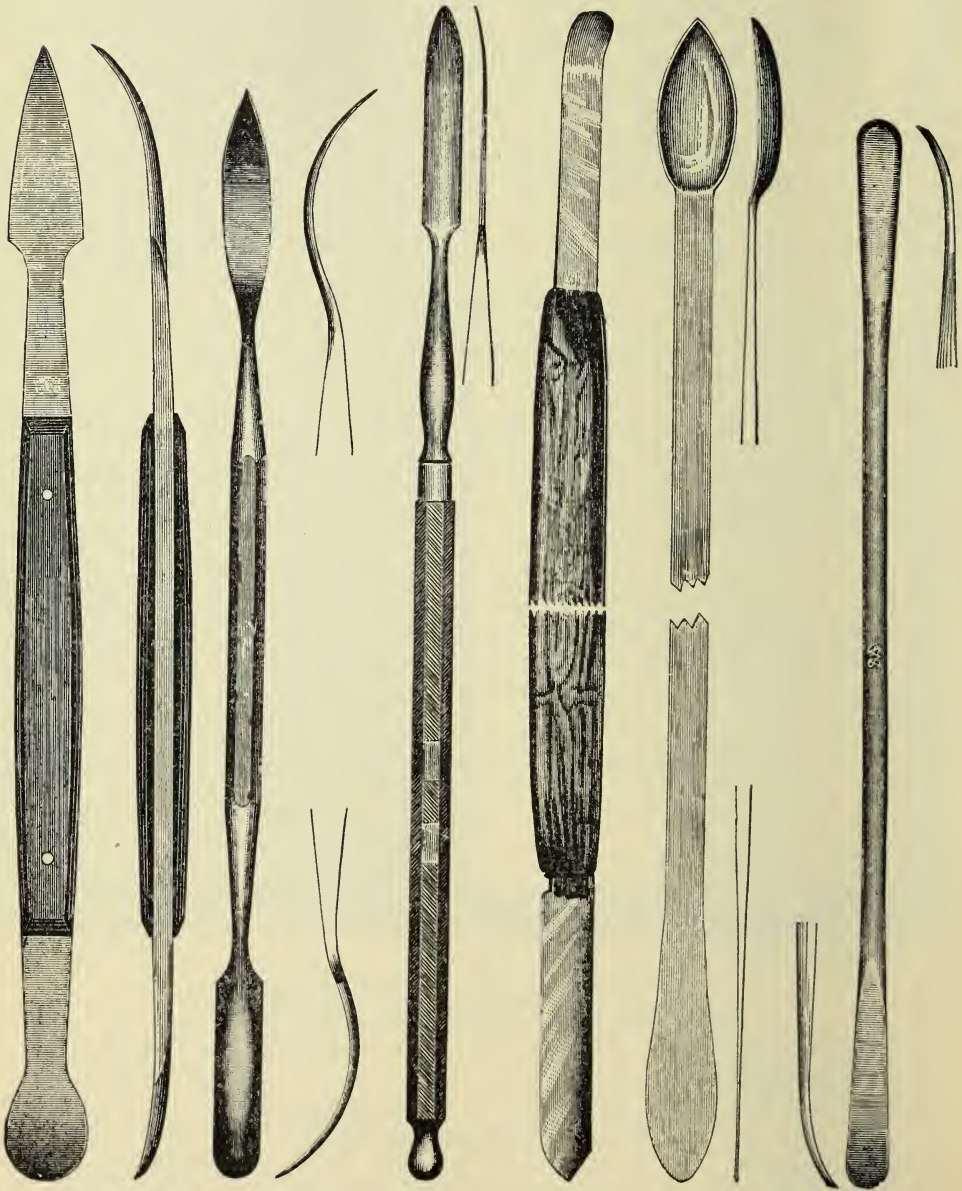
Waxed Cloth for Base-Plates.

18 sheets in a box ..... per box, $0.75

Tenax Wax for Base-Plates.

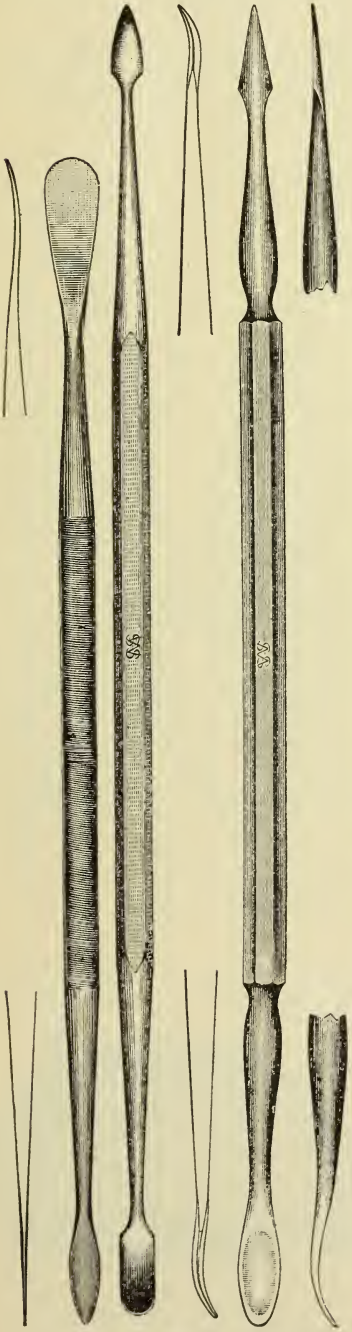
Price, per lb. $1.00

Wax Spatulas.



No. 1.	No. 2.	No. 3.	No. 4.	No. 5.	No 6.
$0.75.	$0.40	$0.40.	$0.60.	$0 25.	$0.20.

Wax Spatulas.



No. 7. $0.50.

No. 8. $0.50.

No. 9. $0.50.

Continuous Gum Spatulas.

These Spatulas were made from patterns supplied by the late Dr. Ambler Tees, whose skill as a worker in continuous gum was widely known, and they show the forms which he used as best adapted for the purpose.

No. 1 is for applying the body and gum between the necks of the teeth.

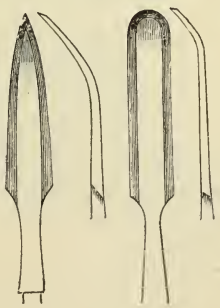
No. 2 is used to imitate the margins and festoons of the gums.

No. 3, to divide the body between the roots of the teeth.

No. 4, to apply the body on the buccal, labial, palatal and lingual surfaces of the teeth.

Price, each.....$0.25

Cone-Socket Wax Knives.



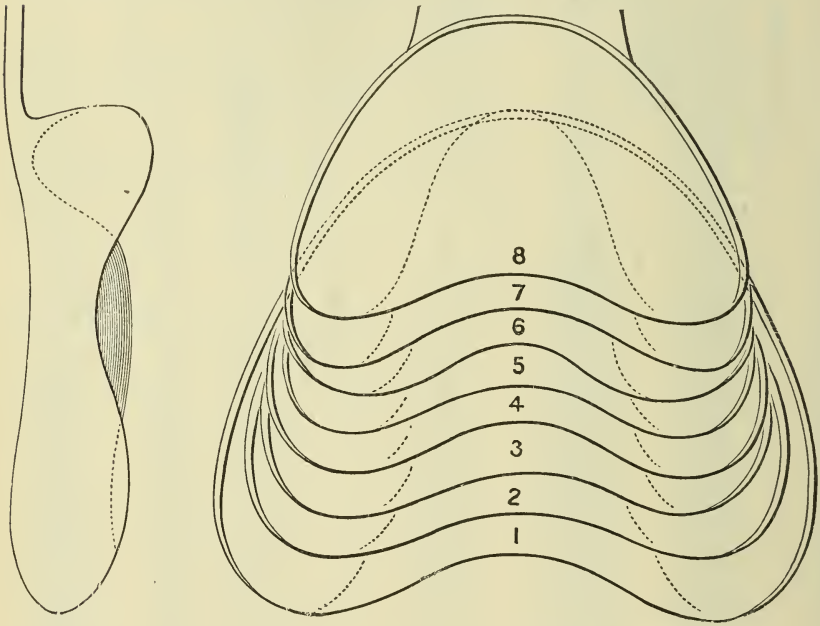
Each $0.25

Impression Trays.

The ordinary cut of an impression tray does not convey much of an idea as to its actual size. For the convenience of our customers we have prepared a system of charts which we are confident will be more satisfactory.

Our trays are made of britannia-metal, of the best quality, and of uniform thickness. They are light enough to allow of alterations with pliers or mallet, or for many cases with the fingers, so as to adapt them to any peculiar formation of the maxilla. They are superior in form and finish.

Upper Impression Trays.



This Chart shows sizes of Upper Trays from one to eight.

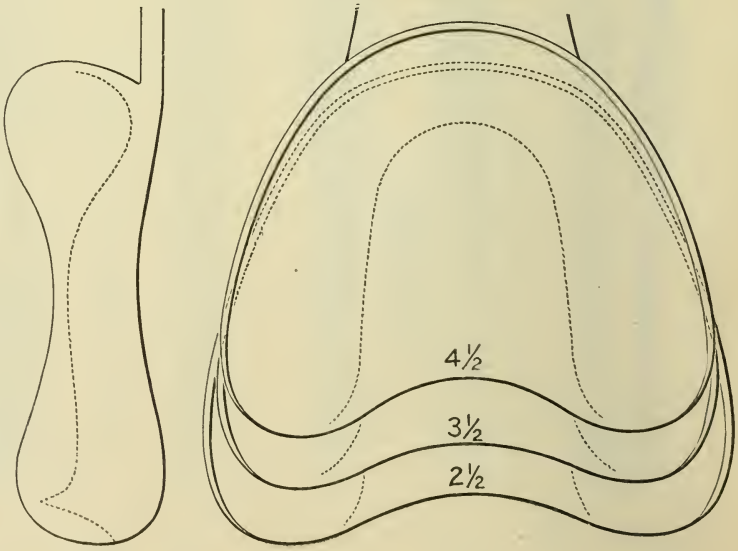
Special attention is invited to the peculiarities of these forms — to the dip at the sides, to accommodate the prominences of the malar processes and in front to avoid the labial frænum; and to the length (1½ inches) and position of the handle, which, being below the line of the base, gives more room for the lip.

Price, each, 25c.

Specially adapted for Plaster.

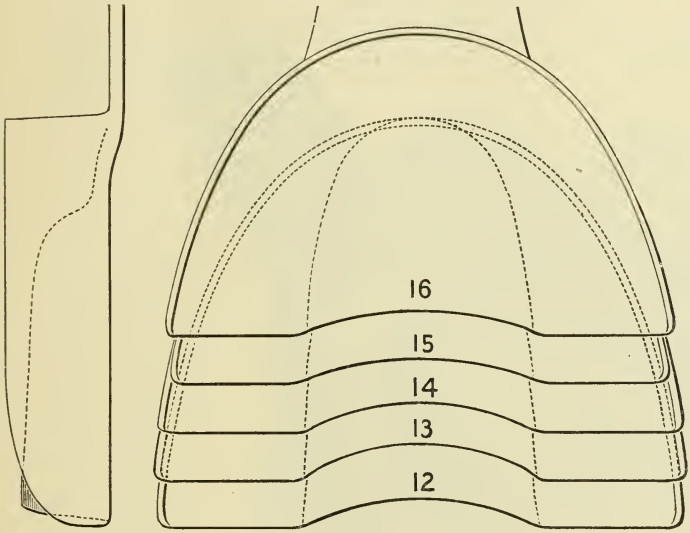
These Trays differ from the regular set of Upper Trays in having raised palatine edge, which makes them especially desirable for taking plaster impressions for Full Upper Dentures, the raised edge preventing the plaster from slipping off the Tray.

Price, each, 25c.



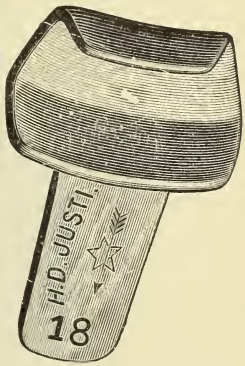
Upper Impression Trays.

With Flat Bottom and Square Sides.



This chart shows sizes of Trays from 12 to 16 (for Partial Upper Dentures), with flat bottom and square sides. The handles 1⅞ inches in length, set below the line of the base. Price, 25 cents.

Partial Upper and Lower Trays.

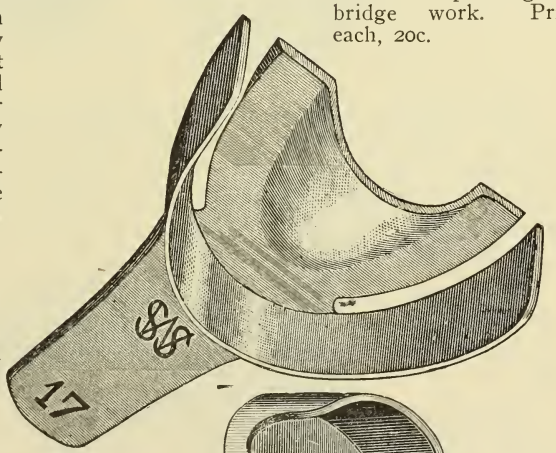


This form illustrates a Partial Upper Tray for one or two teeth. Useful in pivoting and bridge work. Price, each, 20c.

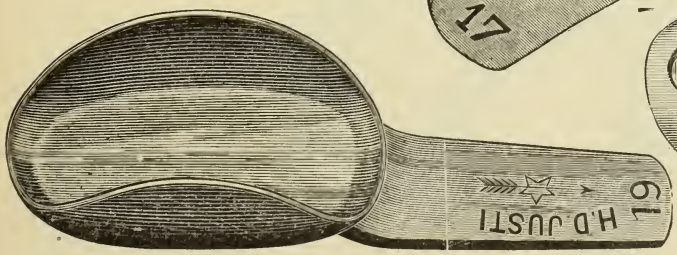
Adjustable Upper Impression Trays.

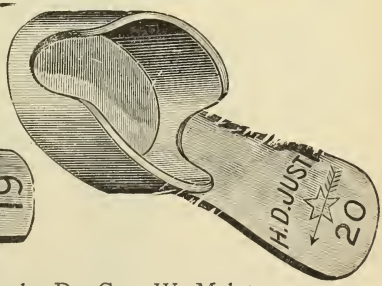
Each of these Trays is stiff enough for ordinary uses, yet can be quickly bent, compressed, twisted, or cut away to meet emergencies or unusual presentations of the teeth, gums or palatine arch. Their great facility of adjustment renders good impressions possible in difficult cases without loss of time. Made in three sizes—17, 18 and 19.

Price, each.....35 cents.



Partial Upper and Lower Trays.





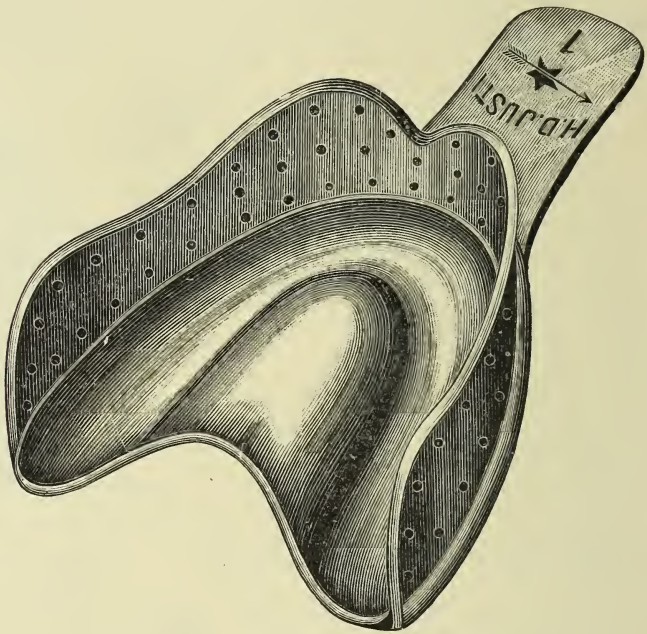
No. 10, suggested by Dr. L. M. Mathews; No. 20, by Dr. Geo. W. Melotte.

These Trays were designed for Partial Cases of every description. They are well adapted for use in any part of the upper or lower jaw.

Price, each..... .....25 cents.

The Weirich New Flexible Rim Impression Trays.

Made by H. D. Justi & Son.



(Patented.)

While plaster impressions are acknowledged to be the only reliable ones, every dentist has found a serious difficulty in obtaining them, owing to the tendency of the plaster on the outside the maxillary ridge to break away when the impression is withdrawn from the mouth. This usually breaks into small pieces, always difficult and often impossible to replace. From this cause sometimes several impressions have to be taken before one sufficiently perfect for use can be obtained.

In this Tray this trouble is removed. The plaster is mixed and applied in the usual way; when withdrawn it will break away, but the pieces, adhering to the rubber, will come directly back into their proper places, and the impression can at once be brought into perfect shape.

This result is obtained by making the rim of the Tray of rubber, as shown in the cut. This rubber is fastened in a groove in the base of the Tray, and is sufficiently rigid to support the plaster while taking the impression, and yet flexible enough to permit the impression to be withdrawn without difficulty.

These upper Trays are of five sizes, No. 1, the largest, being the same as the Regular No. 1 Tray; the others are evenly graded to No. 5, which is small enough for any case likely to be presented.

This invention has been tried by a number of dentists, and pronounced a great success, saving them much annoyance and trouble, and giving them far more perfect results.

Price, Flexible Rim Tray.....$0.75

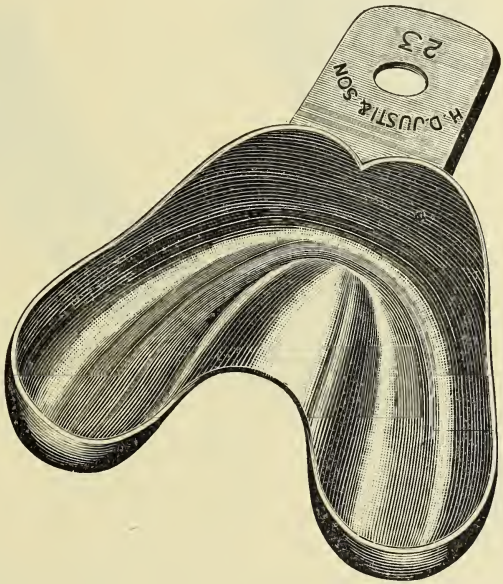
Angle's Impression Trays.

Made by H. D. Justi & Son.

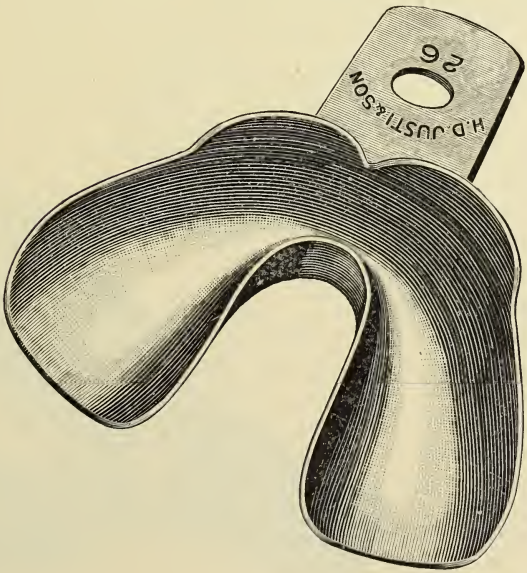
The best Trays for taking partial impressions.

The Trays are of such shape and height that it is only necessary to evenly fill them with plaster, leaving but very little surplus material to cause annoyance.

Uppers, Nos. 21, 22 and 23.



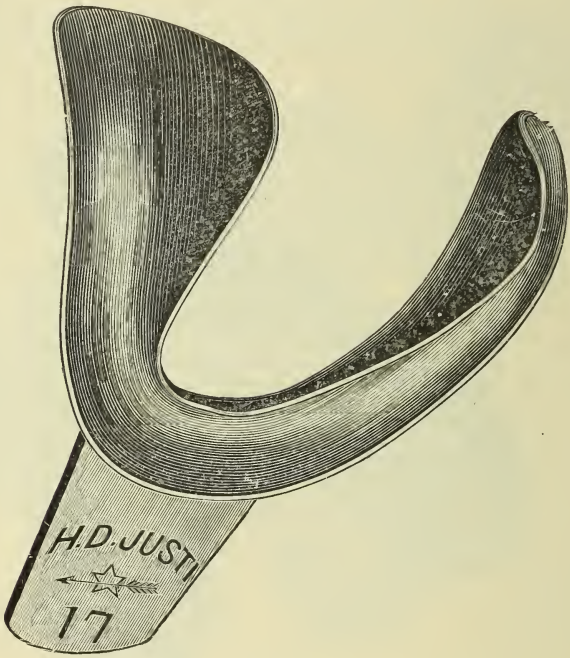
Lowers, 24, 25 and 26.



Price, each..... ....$0.35

Adjustable Lower Impression Trays.

Made by H. D. Justi & Son.



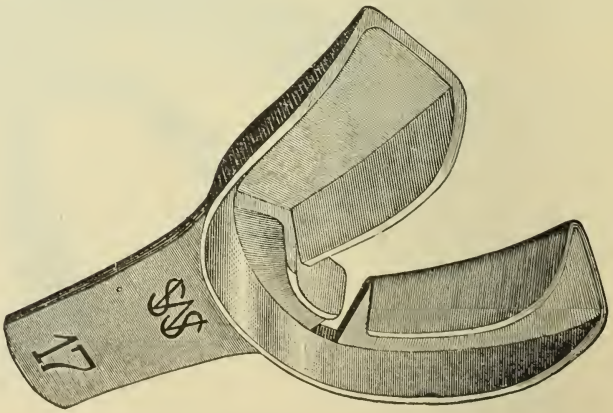
Nos. 17 and 18 are for Full Lower Dentures, No. 17 being the largest. They are very deep and suitable for mouths in which there is good depth under the Molars.

Price, Lower Trays, Nos. 17 and 18.....each $0.25

The Wiley Tray.

In this Tray, suggested by Dr. J. K. Wiley, the inner wall is cut through on either side, with slots running to the outer rim for adjusting the Tray by spreading, closing, or bending the sides.

Price, each.....35 cents.

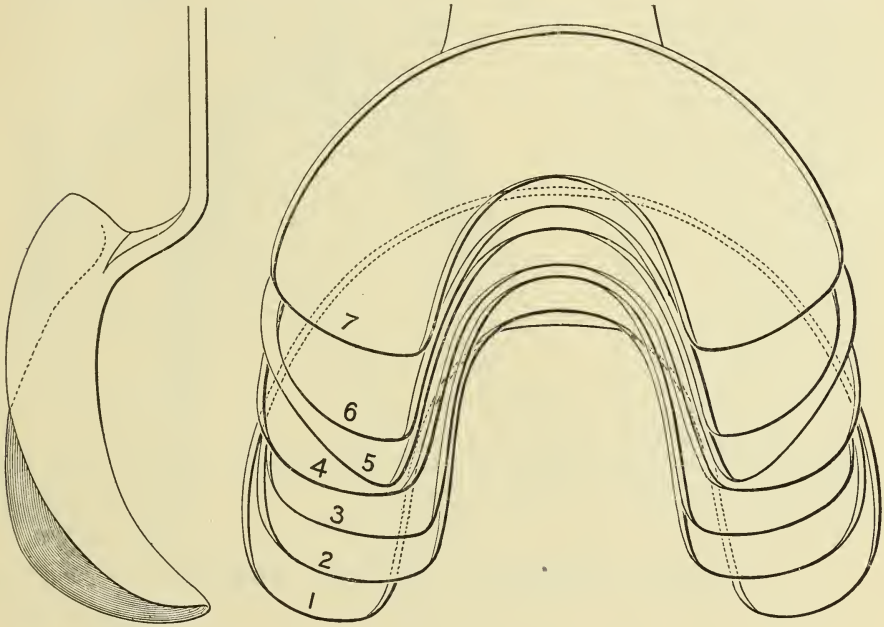


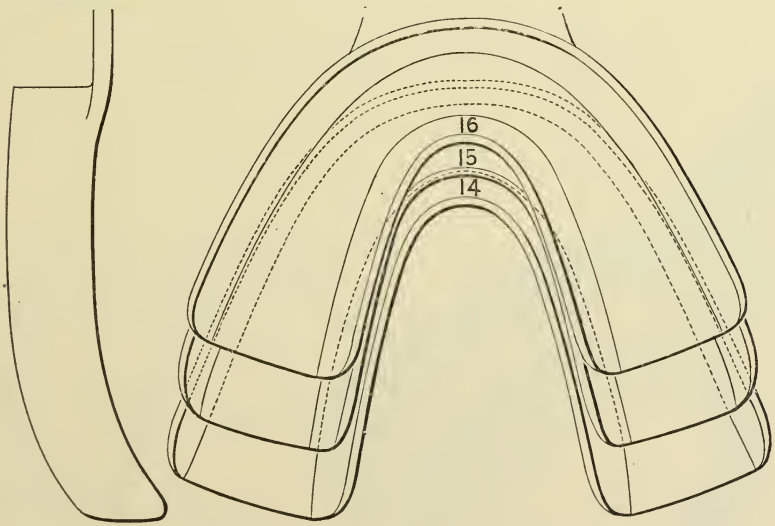
Lower Impression Trays.

This Chart illustrates the sizes of a set of seven, Nos. 1 to 7, for Full Lower Dentures. The inner line is shaped to avoid the lingual frænum.

Nos. 5 and 6 are especially designed for cases where great absorption has taken place, and the muscles of the mouth are on a level with the maxillary ridge.

Price, each..... .....25 cents.



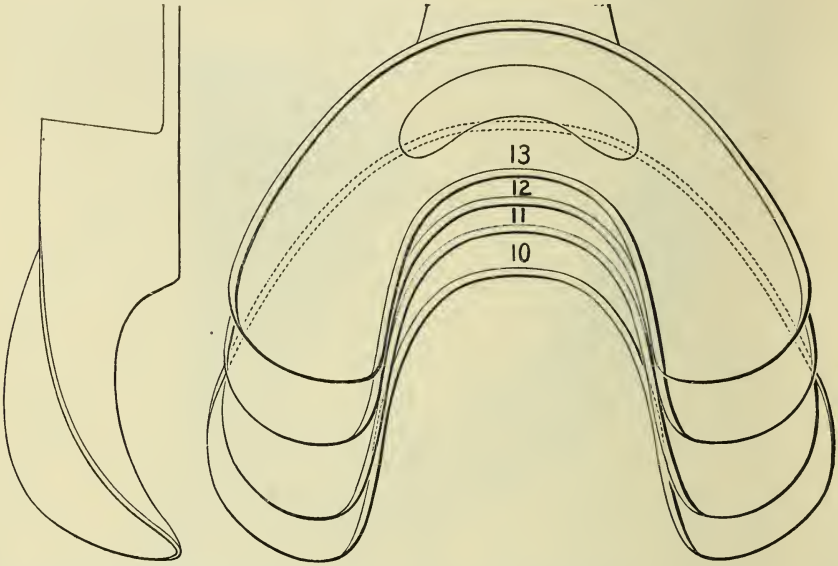


WITH FLAT BOTTOM AND SQUARE SIDES.

This Chart illustrates the sizes of a set of three, Nos. 14 to 16, with flat bottom and square sides, designed especially, in taking impressions of lower teeth, to obtain the antagonizing model for the Upper Dentures.

Price, each..... .....25 cents.

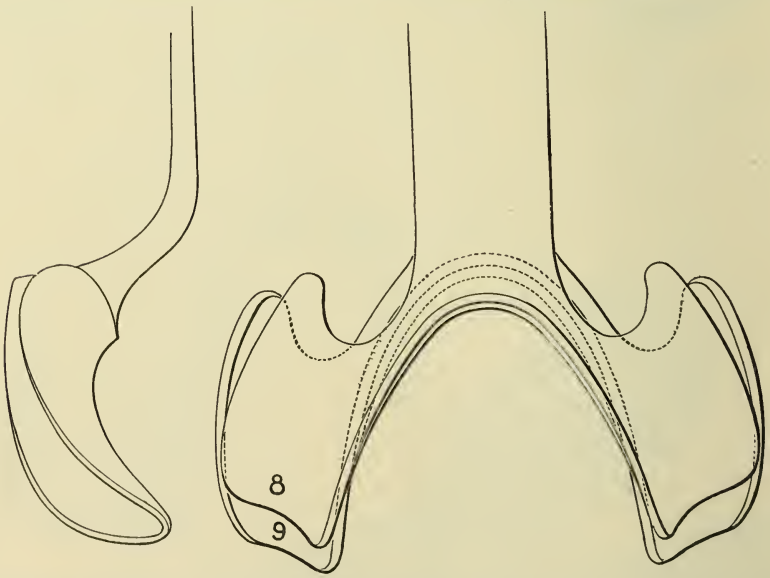
Partial Lower Impression Trays.



ThisChart illustrates the sizes of a set of four, for Partial Lower Dentures, with an opening to allow the front teeth to pass through.

Price, each.....25 cents.

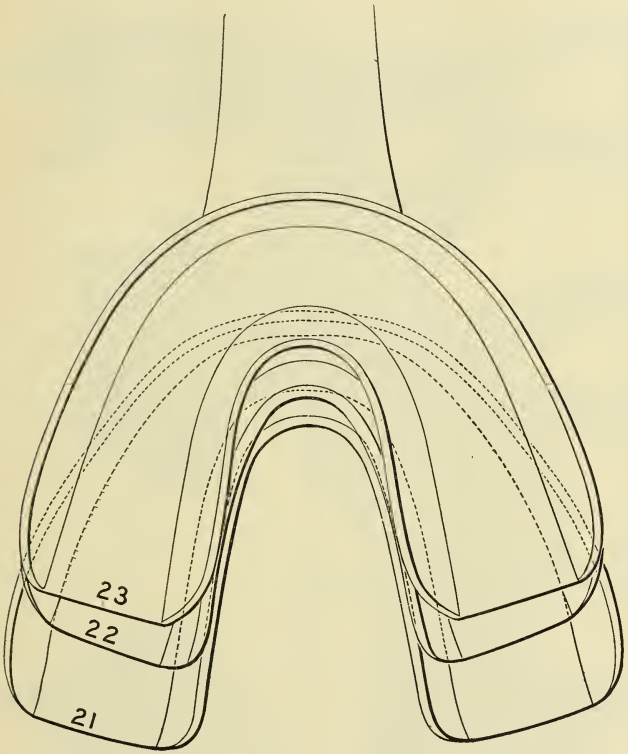
Lower Impression Trays for Undercuts.



In Trays Nos. 8 and 9, the rim is cut away, allowing it to be placed in the mouth with the impression material in it, and pressed downward and forward against the front teeth, procuring a perfect impression of undercuts or shelving gums.

Price, Lower Trays, for Undercuts, each.....25 cents.

Deep Lower Impresston Trays for Regulating.

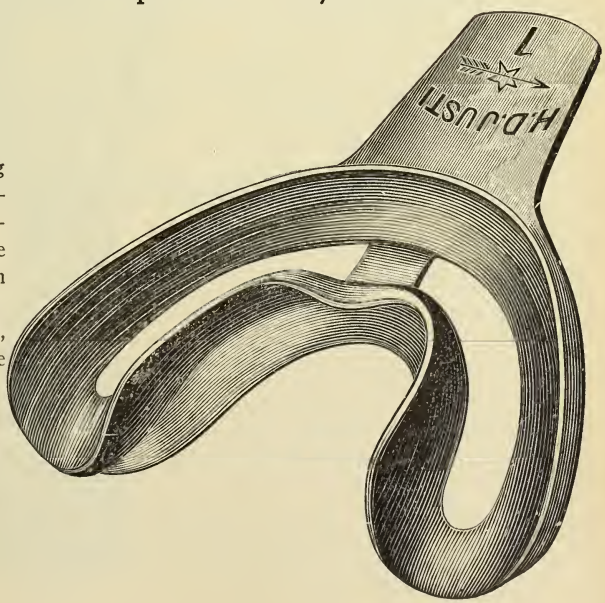


Nos. 21 and 22 are for cases where specially deep Trays are required. The lingual extensions are adapted to secure accurate impressions when the lower molars are missing.

The object of the No. 23 Tray is to supply a ready means of taking impressions of the entire lower crowns and gum in cases where only a few teeth are missing. For this reason the walls, both outside and inside, are made high and strong, and run out almost flush with the ends.

Price, Nos. 21, 22 or 23, each.....35 cents.

Franklin's Lower Impression Trays.

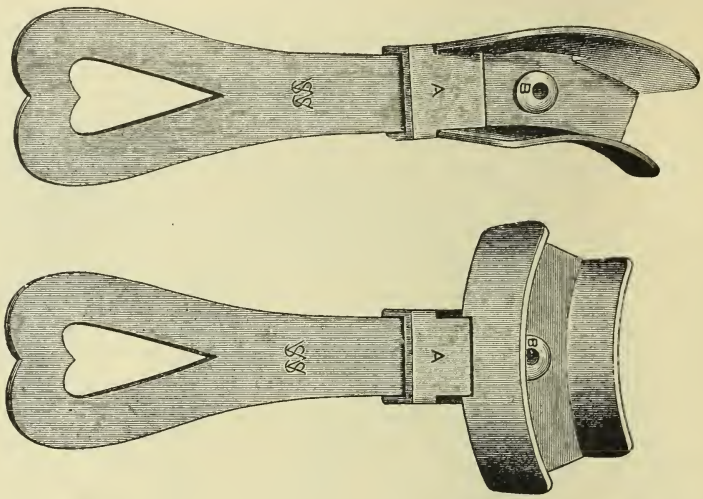


The Franklin Tray is for taking lower impressions. It allows the superfluous plaster to come into the upper part of the Tray, where it can be stirred until it is perfectly free from air bubbles.

There are three sizes of this Tray, No. 1, shown in the cut, being the largest.

Price, Franklin's Lower Trays ....each $0.50

Adjustable Partial Impression Tray.

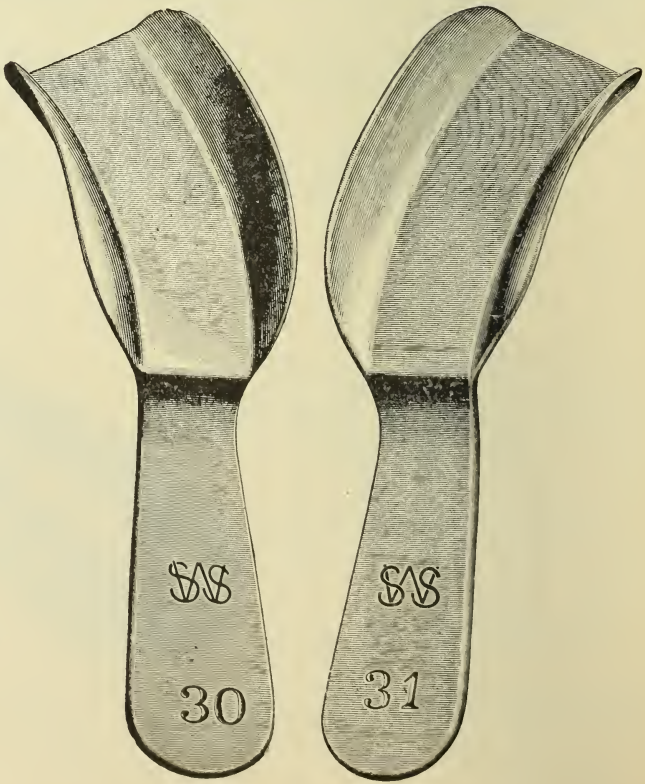


This device conveniently takes the place of three partial impression trays.

The Tray proper rotates on the pivot B, and is thus perfectly adapted for use in the front or either side of the mouth; and is firmly held in either position by the sliding guard A.

Price..each $0.60

Partial Impression Trays.



These two new forms of Partial Impression Trays will be found especially useful in cases where spaces intervene between molars and bicuspids or molars and cuspids. They are designed for taking impressions of both upper and lower partials, and are especially adapted for bridge-work cases; No. 30 for either the upper left or the lower right, and No. 31 for the upper right or the lower left, as the case may be.

PRICES.

Partial Impression Trays,
Nos. 30, 31.....each $0.25

Partial Impression Trays.

Partial Upper Tray No. 18 is well adapted for crown and Bridge Work to take the impression of one or two teeth.

Price, Partial Upper Tray, No. 18.....each $0.20

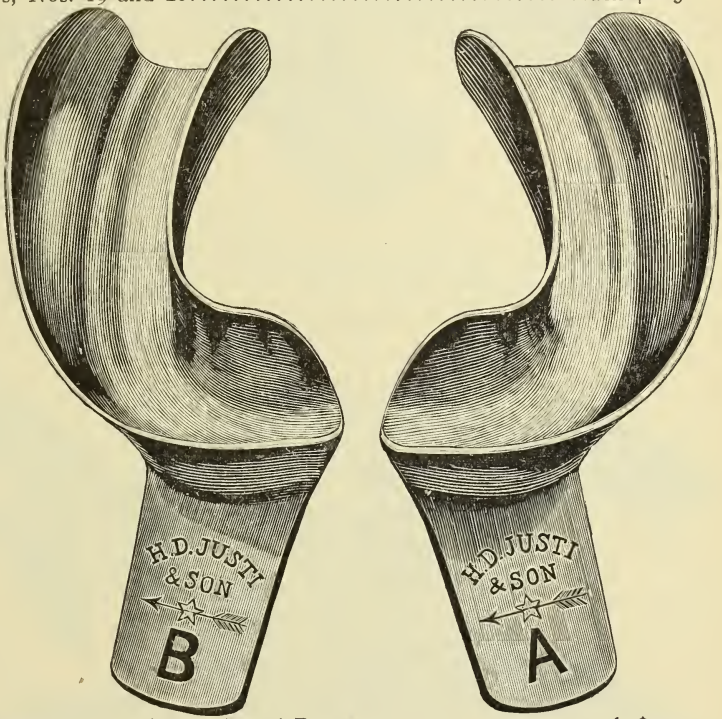
Partial Upper and Lower Trays, Nos. 19 and 20, are designed for partial cases of every description.

Price, Partial Trays, Nos. 19 and 20.....each $0.25

These Trays are considered very useful for partial pieces of crown and bridge work.

A is intended for left upper and right lower.

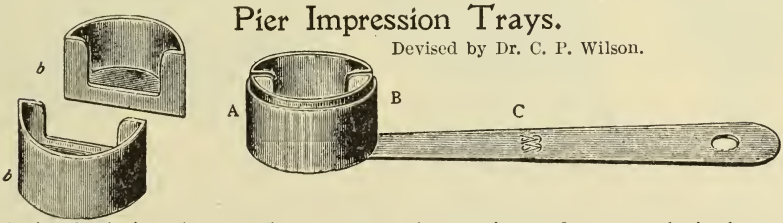
B for right upper and left lower.



Price, Upper and Lower Partial Trays A and B.....each $0.25

Pier Impression Trays.

Devised by Dr. C. P. Wilson.



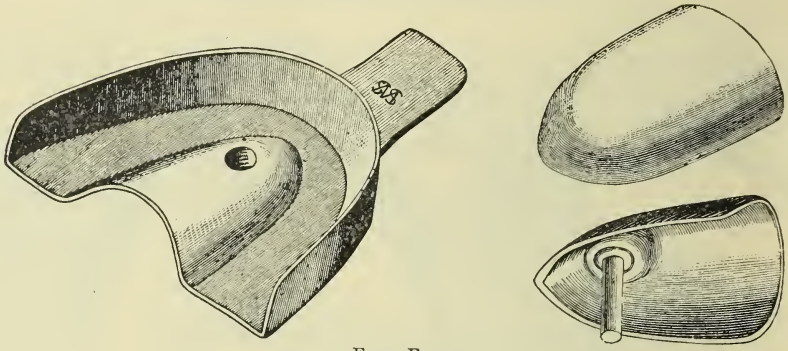
The device is designed to produce accurate impressions of separated single teeth which are to serve as piers for dental bridges and plates, or for regulating attachments.

Thick-mixed plaster is to be placed in the Pier Tray, which is then pressed over the tooth. The holder A telescopes upon the trays, from which it is to be slipped by the handle C, leaving the tray upon the tooth. A very thin knife, or excavator, is then pushed between the partial divisions of the tray near its contact with the gum to effect a lateral separation of the two parts of the tray, and the impression. The parts readily separate from the tooth with a line of fracture that enables them to be rejoined and the tray replaced in the holder. This is pivoted so that the dividing line of the tray may be mesio-distal when the handle is turned to a convenient angle for taking the impression, from which a perfect plaster model (or several of them) may be obtained.

At *b, b,* are shown the separable parts of the tray B, which can be placed in the holder so that the fracture may occur at any desired angle relative to the pier tooth. Two sizes. The cut is exact size of No. 1 Tray. The Tray of No. 2 is 1-16-inch larger in diameter.

Price .....either size $0.40

Movable Palate-Plate Tray.



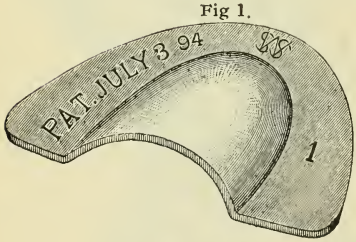
Form E.

Form E illustrates the movable Palate-Plate Tray.

Price of Tray, with two Palate Plates complete.....$1.00
" " " without Palate-Plate.....35
" " Palate-Pieces.....each .35

True Bite Plates.

Fig 1.



No. 10.

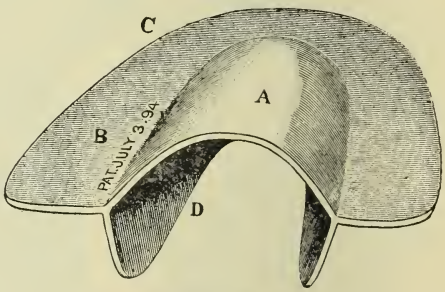
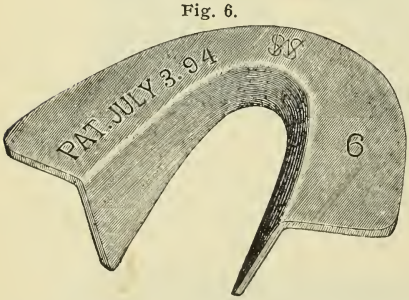
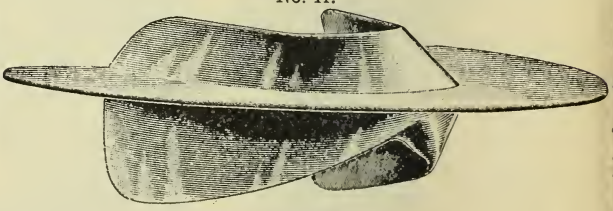


Fig. 6.

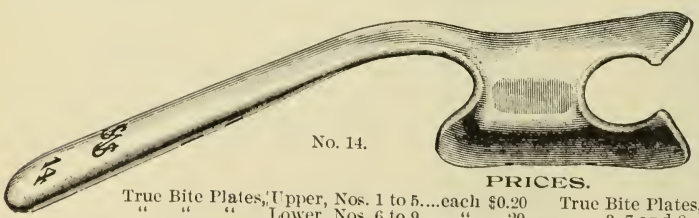


No. 11.



Patented July 3, 1894.

A true bite and an accurate impression are prime factors in the process of making a successful complete or partial denture. To save time, get an exact tooth-length gauge and a correct articulation, the bite should be taken at the first sitting. This can now be readily done by the use of the True Bite Plates, which we supply in eleven sizes: The Uppers are Nos. 1, 2, 3, 4, 5—the cut, Fig. 1, shows the smallest size. The Lowers are Nos. 6, 7, 8, 9 –the cut Fig. 6, shows the smallest size. The combined Upper and Lower Duplex are shown in Nos. 10 and 11, while one of the partial plates of which we supply four numbers 12, 13, 14 and 15 is shown below.



No. 14.

The soft, yet sufficiently stiff and thin metal of the Bite Plates may be sheared for change of edge contour, bent for adaption, or cut with Plate Nippers for partial cases.

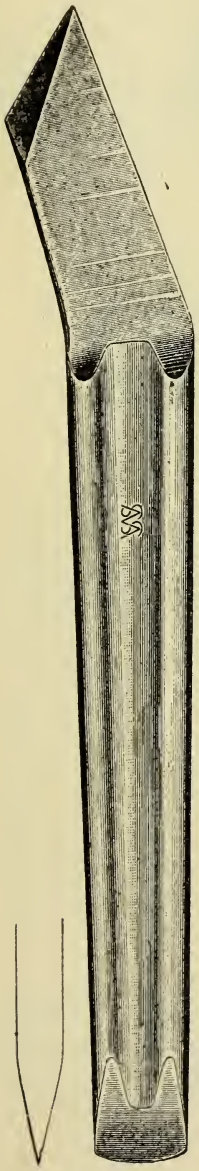
With a pair of Plate Nippers the operator may easily change either the upper or lower plate into a partial one by nipping out spaces to suit the case in hand.

PRICES.

True Bite Plates, Upper, Nos. 1 to 5....each $0.20
" " " Lower, Nos. 6 to 9..... " .20
" " " Upper and Lower Duplex Nos. 10 and 11.....each .35
True Bite Plates, Partial, Nos. 12, 13, 14, 15 ea. .35

True Bite Plates, Trial set of four, Nos. 2, 3, 7 and 8.....per set $0.75
True Bite Plates, Complete set, Nos. 1 to 11 2.25
" " " " " " 1 to 15 3.65

Hoff's Plaster Knife.



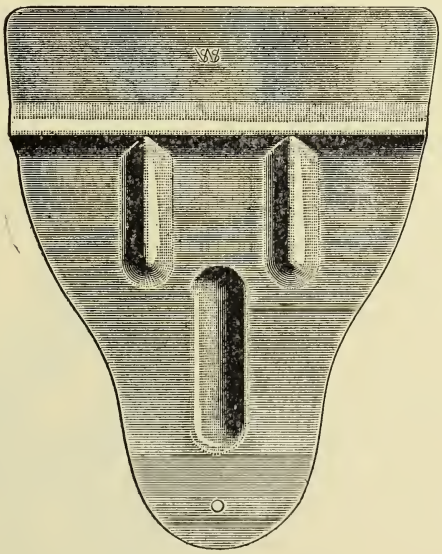
This Plaster Knife is made of a single piece of steel, and is shown in the cut of full size. The angle of the blade with the handle perfectly adapts it for paring plaster casts either by a draw or push cut.

The sharp chisel at the end of the handle will be found specially useful in chipping off the impression from the cast.

It will be found a convenient instrument in the laboratory for a variety of uses.

Price ..... $ .50

Articulating Plates.



After the plaster for the first half of a model is poured in one side of a "squash" bite, instead of waiting till it sets thoroughly to carve dowels or grooves, an Articulating Plate is slightly imbedded in the surface while still plastic. In three or four minutes the Plate can be removed, the surface of the plaster coated with parting fluid, and the second half run.

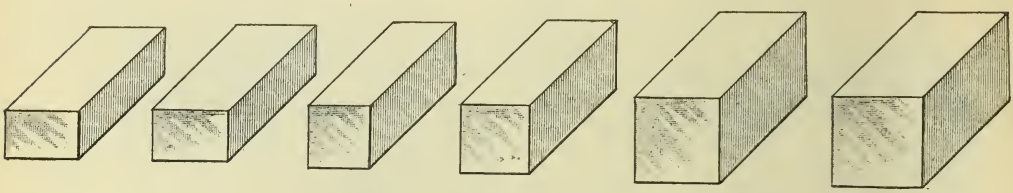
These Articulating Plates do the work quickly and cleanly. If several models are to be run the saving of time will be considerable.

Full directions for use accompany each plate.

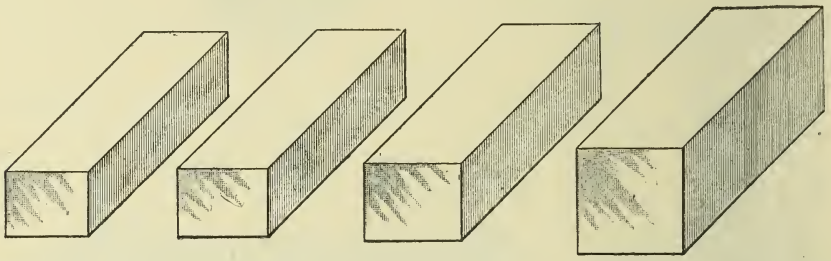
Price, No. 1 ..... each $ .10
Price, No. 2 ..... each .15

Harper's Ivory Blocks.

Made by H. D. Justi & Son.



Tenney's Ivory Blocks.



These two sets of Ivory Blocks are adopted by some colleges for the same purposes as Rubber Tooth Forms.

PRICES.

Harper's Ivory Blocks.....per set of 6 $0.45
Tenney's Ivory Blocks.....per set of 4 0.50

Articulating Forms.

Made by Lee S. Smith & Son, Pittsburg, Pa.

For use in technic teaching as indicated in Week's Technics.

Made on correct principles at the request of numerous dental faculties.

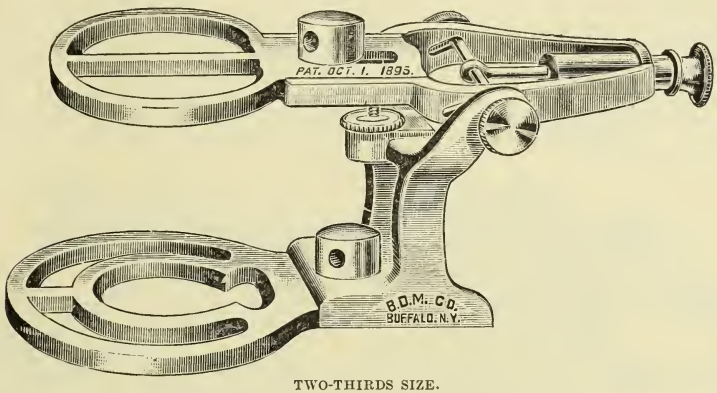
The form as shown is made of brass of same proportion as regular articulator, and while having all the movements of that instrument, may be fastened open as desired.

Price, each.....$1.00

No. 11. Antes Anatomical Articulator.

Made by Buffalo Dental Mfg. Co.

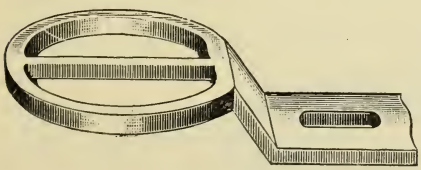
(Patented by Dr. Robert H. Antes, Geneseo, Ill.)



TWO-THIRDS SIZE.

The object of this Articulator is to supply means whereby the natural movements of the human jaw can be closely followed, thus enabling an artificial set of teeth to be assembled that will imitate the natural teeth in position and correctness of bite. It is divested of all superfluous parts not absolutely required in the proper articulation of artificial teeth, yet it contains all mechanical essentials for practical anatomical purposes.

This Articulator embraces features whereby a lateral movement in a curved plane on either side of the center line is obtained by means of angular slots in the yoke which forms the hinge. The slots in the yoke also allow an endwise, or forward and back movement of the upper plate on a horizontal plane; and when the pressure imparting each movement is relaxed the parts are automatically returned to their normal position by the encased spring on the end of the yoke. If desired, the yoke can be deprived of all motions, except the hinged one, by compressing the spring by means of the milled sleeve on the end of the yoke. These combined features are not present in any other Articulator.



Both the upper and lower plates are removable, thus enabling an extra set of plates to be used on one body. The upper plate can be supplied with an off-set to accommodate thick casts.

The body of the Articulator is of improved shape, and will be found to fit the hand perfectly.

PRICES.

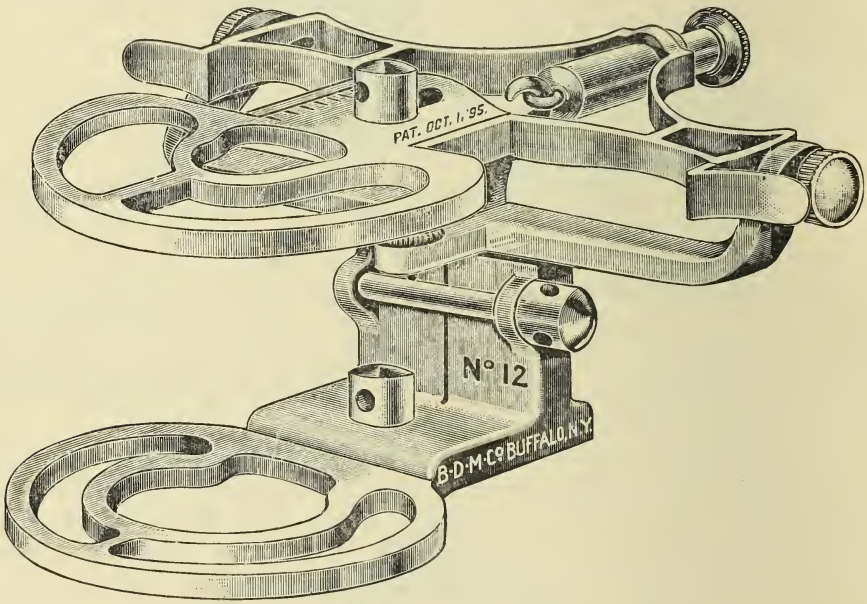
No. 11. Antes Anatomical Articulator, nickel dipped $2.00
Extra top or bottom plates, each..... .... .20
Extra top plate, with off-set..... .... .20

No. 12. Antes-Lewis Anatomical Articulator.

(Patented October 1, 1895.)

Made by Buffalo Dental Mfg. Co.

The success of the Antes Articulator No. 11, created a desire to produce an Articulator to more accurately conform to the requirements of a perfect Anatomical Articulator as set forth by the late Dr. W. G. A. Bonwill, as to the measurements between the condyles, and the measurements from the condyles to the cutting edges of the incisors, viz.: an equilateral triangle of four inches. The extension of the arm of the bracket carrying the top plate, and its supporting bracket, accomplished this desirable feature without interfering with the perfect mechanical movements relating to the lateral and forward and back movement of the original Antes Articulator.



This Articulator embraces features whereby a lateral movement in a curved plane on either side of the center line is obtained by means of angular slots in the yoke which forms the hinge. The slots in the yoke also allow an endwise, or forward and back movement of the upper plate on a horizontal plane; and when the pressure imparting each movement is relaxed the parts are automatically returned to their normal position by the encased spring on the end of the yoke. If desired, the yoke can be deprived of all motions, except the hinged one, by compressing the spring by means of the milled sleeve on the end of the yoke. These combined features are not present in any other Articulator excepting the Antes No. 11.

A locking device by which the upper plate is sustained in a position at right angles to the base has been added to this Articulator. This prevents the upper portion from falling down to the injury of teeth or cast.

The upper plate and also the sliding post are indexed, to enable the parts to be returned to the place previously occupied, should there be occasion to remove either the plate, or yoke from the body of the Articulator. Thumb pieces have been supplied to the oscillating yoke for the purpose of operating it when testing the case for occlusion.

Provision has been made in the body of the Articulator for raising or lowering or in other words increasing the distance between the upper and lower plates to accommodate the different thicknesses of casts.

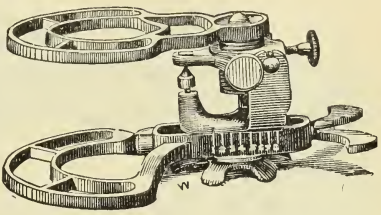
Both the upper and lower plates are removable, thus enabling an extra set of plates to be used on one body.

PRICES.

No. 12 Antes-Lewis Anatomical Articulator.....$2.50
Extra top or bottom plates, each..... .20

No. 5. Hayes Articulator.

Made by Buffalo Dental Mfg. Co.



This articulator is the first one invented which dispensed with a removable pin in the joint, a part which is so easily lost or mislaid, and the absence of which causes so much annoyance.

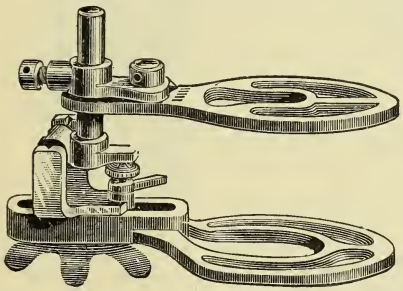
The Hayes Articulator is capable of all the motions required in an articulator, and can be brought back to its first position, if desired, after a change, with ease and certainty. Each motion is independent, and the self-locking device which constitutes the joint makes it a very desirable implement of the kind.

PRICES.

No. 5. Hayes Articulator.....$2.50
Polished and nickel plated..... 3.00

No. 8. Lewis Independent Motion Articulator.

Made by Buffalo Dental Mfg. Co.



In the construction of this articulator, the desirable points in several articulators have been combined with new devices to produce a practical implement in every particular.

Every motion is independent. The means for correcting false positions in the bite are complete in every respect, while the range to accommodate different thicknesses of casts is ample. Substantially the same articulator has been in constant use by the designer for several years, and has been found to be as near perfection as possible.

The hinge of this articulator is constructed without a removable pin. It is easily taken apart by turning back the top of the articulator to a right angle to the base, and pressing to the right.

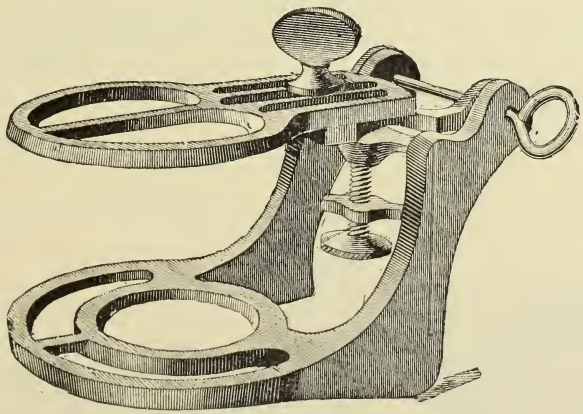
DECIDEDLY THE BEST ARTICULATOR MADE.

PRICES.

No. 8. Lewis Independent Motion Articulator, plain brass.....$2.00
No. 8. Lewis Independent Motion Articulator, polished and nickel plated..... 2.50

Articulator No. 1.

Made by H. D. Justi & Son.



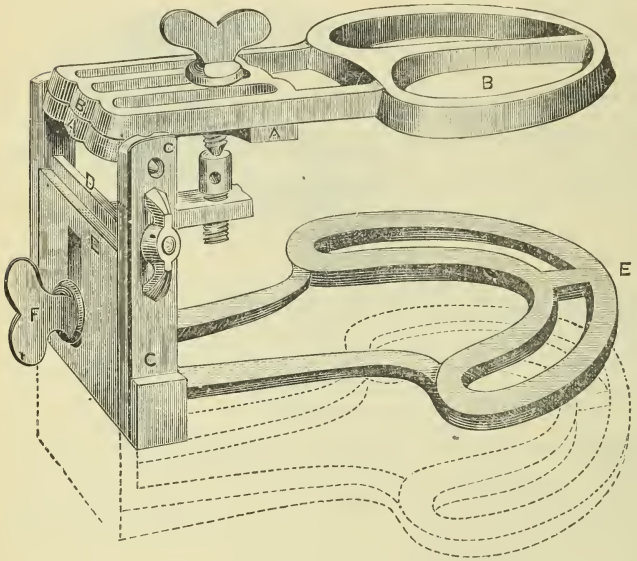
Many dentists like to have a considerable number of Articulators in the laboratory, yet do not care to invest in many of the higher priced ones. To meet this demand has been made the No. 1., in which the vertical extension of the jaws is dispensed with.

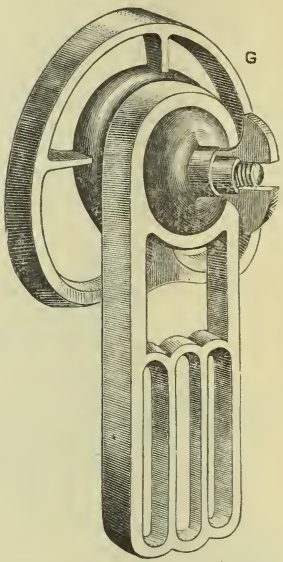
This is a well made and reliable Articulator, nickel-plated but not polished, and will be found a good practical instrument in all ordinary cases.

PRICES.

No. 1, Plain Nickel-Dipped.....$0.90
No. 1, Nickel-Plated and Polished..... 1.25

Articulator Nos. 2 and 3.





This illustrates Articulator No. 2. Reference to the cut will show their peculiar construction and adaptation to convenient use in articulation. By loosening the thumb-screw F the lower jaw can be moved downward so as to largely increase the space between the jaws, as shown by the dotted lines.

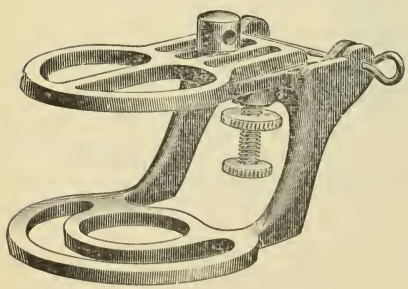
The upper jaw can be easily removed by turning the nut on the side of the frame half way round, this releases the spring C and the pivot can be lifted out of the socket.

Articulator No. 3.

This Upper Jaw of the Articulator attached to the frame by a ball and socket joint is the invention of Dr. D. L. Overholser, and is an addition to the other movements which makes this the most perfect instrument and capable of the finest adjustment by which to correct errors that may occur in taking articulations.

This, with the rest of the frame as in No. 2 is our No. 3.

Price, No. 2.....$2.00
Price, No. 3.....$2.50



No. 9. Articulator.

Made by Buffalo Dental Mfg. Co.

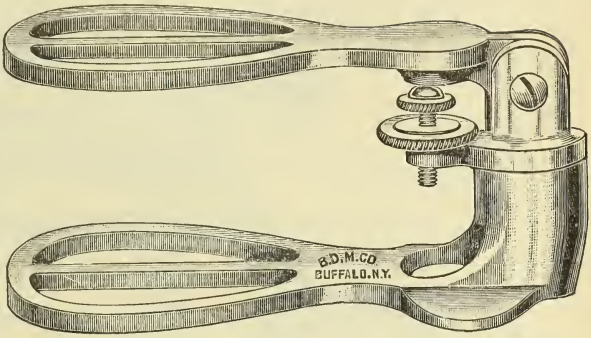
This articulator is now made from new patterns, heavier and stronger than heretofore, and is probably the best cheap articulator in the market.

PRICES.

No. 9 Articulator, plain, each.....$0.80
No. 9 Articulator, nickel plated, each..... 1.00

No. 10. Lewis Crown Articulator.

Made by Buffalo Dental Mfg. Co.



The demand for a more perfect Crown Articulator has been met by the production of one containing new and practical features which will be appreciated by practical men.

The top of the Articulator is hinged in such a manner that it can be turned back parallel with the base, which overcomes the disagreeable feature of falling by accident onto the base and breaking the casts, and also enables one to fit a Crown in position without the obstruction of either half of the Articulator. It has also a side or lateral motion, by which a test of the proper occlusion of the cusps of the Crown can be obtained. This lateral motion can be continued to a quarter or a complete revolution if desired, thereby affording another means of free access to the cast. By the action of a spring and lock, the top plate is restored to its original position in line with the base and held firmly. This feature is presented in no other Articulator, and is admitted to be a valuable one.

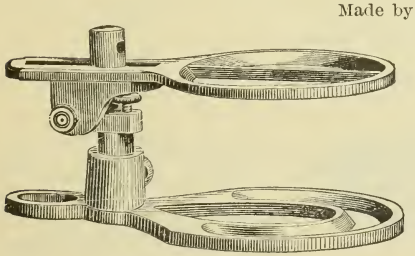
Wings have been placed on the base to prevent falling over. The adjustment for height is accomplished by a milled screw and set nut, as in other Articulators of our make.

PRICE.

No. 10. Lewis Crown Articulator, nickel dipped.....50 cents.

Dental Articulators.

Made by Buffalo Dental Mfg. Co.



No. 4. The Snow and Lewis Articulator.

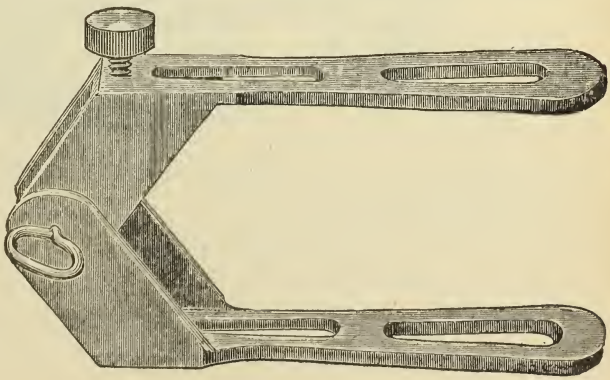
This articulator is capable of adjustment vertically by means of a sliding post and clamping screw, so as to accommodate two casts, for a full upper and lower set, or one cast, for a single set. It is made from heavy castings and all the joints are nicely fitted. The adjusting screw is secured by means of a jam-nut, so that there is no danger of losing the right length of bite, in handling the articulator.

PRICES.

No. 4. Snow & Lewis Articulator.....$2.00
Nickel Plated..... ..... 2.50

Crown Articulator No. 5.

Made by H. D. Justi & Son.

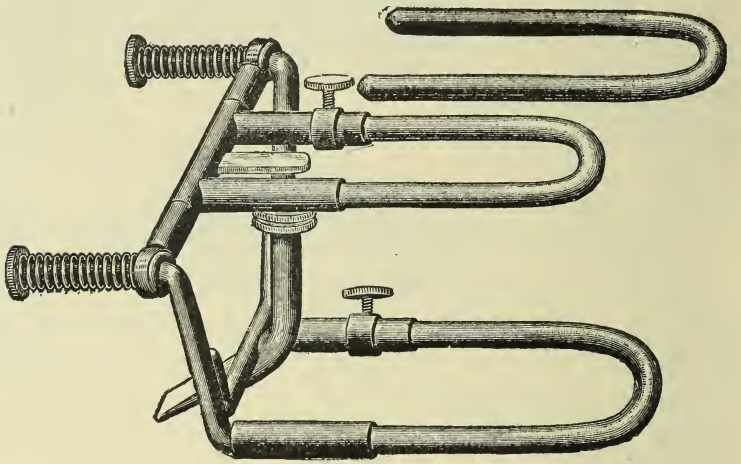


This articulator, improved by the addition of the graduating screw, is particularly well adapted to the adjustment of small or partial dentures, as it affords a view of the palatal as well as the buccal faces of the teeth. Price, Brass, Nickel-dipped....$0.25

Articulator. No. 4.

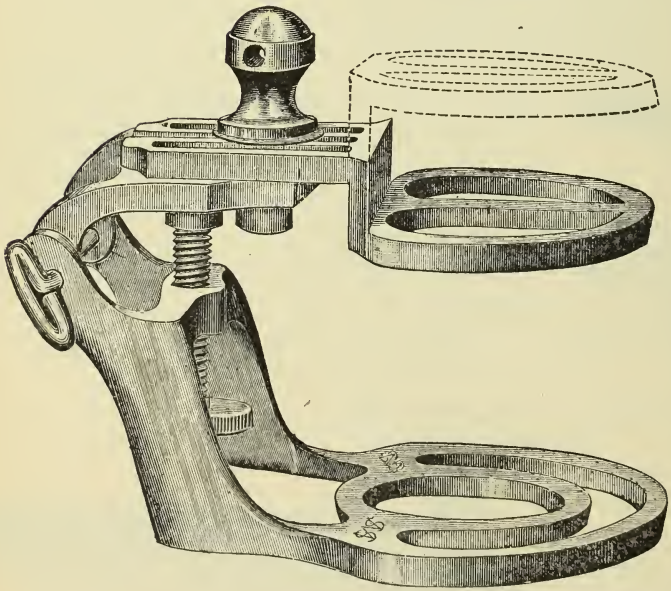
Made by H. D. Justi & Son.

Modified Bonwill Pattern, with 8 Loops and Screw Post.



Price $2.00

S. S. White's, No. 6.



The upper plate has a double bend, so that when reversed, as shown by the dotted lines in cut, the space between the plates is increased one inch, giving ample room for extra length of bite in upper and lower dentures.

Price, Polished and Lacquered $2.00
Price, Nickel-plated... 2.50

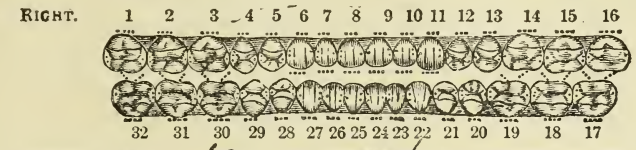
Miscellaneous Articulators.

S. S. White's	No. 1	each $1.00
"	No. 2 Polished and laquered	each 2.00
"	No. 2 Nickel-plated	each 2.50
"	Plain Line	each .90
"	No. 4	each 2.50
"	No. 7 Anatomical	2.00
"	No. 8 Crown	.50
"	No. 9 Crown	.50

Bannister's Appointment-Day Book.

Copyright secured.

Published by The Ransom & Randolph Co., Toledo, Ohio.



Thursday Nov 18/97

	NAME.	SERVICE RENDERED.	DR.	CR.
8	Frank Kirby	10^{2} F.	3 50	
9		14^{2} A	2 -	
10	Howard Cleveland	4^{3} F.	5 -	5 -
11	Mrs. Kirby	10^{2} F.	4 -	
12	" "	28^{2} F 30^{2} 31^{2} F 4^{2}	7 -	
1	Florence Kirby	26^{2} F.	3 -	
2	" "	21 Ex	1 -	
3	John Harrison	13 Gold Crn.	15 -	10 -
4	Willard Kirby	10^{2} F.	2 -	
5	Miss Jones	Tpc	1 -	

Friday

8				
9				
10				
11				
12				
1				
2				
3				
4				
5				

Saturday

8	
9	

The prominent feature of this Appointment-Day Book is the cut of the teeth, which are engraved in two straight lines for economy of space, and are numbered from 1 to 32.

Dots are used to represent the location of a filling; thus 10^{2} would mean that tooth No. 10 had been operated upon in the location indicated by: (two dots).

The Bannister system of Dental book-keeping starts with the book illustrated above and ends with the bill to the patient, the same cuts being used throughout. The book illustrated is a combination appointment and day book in which the dentist may charge the work done opposite the appointment, and give credit for cash that may be paid.

Under date of Thursday, Nov. 18th, in the engraving, may be seen a fac-simile of one day's work, and we call attention to the work done for the Kirby family, which will be found charged to its head, Frank Kirby, in the illustration of the Bannister Register Ledger advertised on page 628.

The Appointment-Day Book is well bound in leather and contains pages for one year's use. When open it presents engagements for one week, and being without dates can be begun at any time.

In the book are calendars and a list of abbreviations which will be convenient to adopt.

Price, - - 75 Cents.

The Improved Diagram Appointment Book.

Published by Lee S. Smith & Son, Pittsburg.

The matter on the opposite page is an exact reproduction of a page in The Improved Diagram Appointment Book. It isn't necessary to tell the nature of the improvement to any Dentist who has ever used an appointment book similar to this. It will be apparent at a glance.

The pages of the Improved Book are larger, the diagram is larger and there are three lines to each hour instead of two. Besides these features the pages are numbered and dollar and cent columns have been added. The paper is of superior quality.

This style of appointment book was originally made for the pocket, but as its size rendered it rather unwieldy for pocket use, it was neither the one thing or the other. The space was too contracted to make it possible to keep an exact record.

As now made it can still be used as a pocket book, but is intended as more of a desk book. It is a light, convenient form of appointment book combined with a diagram for registering the work to be done or to make memorandum of the work when finished. The diagram is the simplest possible form, but is just as efficient as any. The book will cover a year's appointments.

The Improved Diagram Appointment Book isn't supposed to take the place of all the account books in a Dentist's Office. It is simply a book of accurate memoranda that may be copied into a large ledger, if desired.

The simplest way of recording the work done is by letting hour of appointment stand for that person in the diagram. Thus the figure 3 in the diagram stands for Mrs. Edgecomb the 3 o'clock appointment.

PRICE.

Flexible Leather Binding.....$0.60

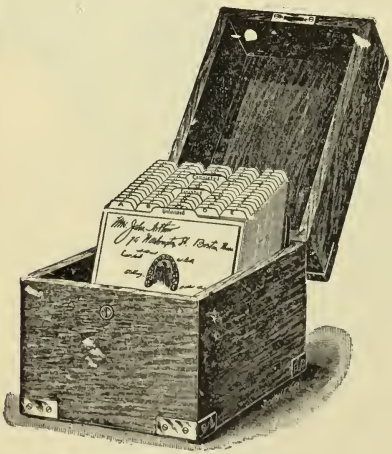
Diagram Appointment Book and Pocket Diary.

Similar to above, but smaller in size.

PRICES.

With Tuck $0.80
Leather ..... .50
Cloth ..... .30

The Triggs' Dental Charts.



ARTHUR, MOUNTAIN & CO., Manufacturers,
NEW YORK.

DON'T buy a New Ledger until you see a Modern Card Index System of

DENTAL BOOKKEEPING

It is used and endorsed by the leading members of the profession. Affords easy and rapid reference to all accounts, no matter how old; is simple in construction and saves time and labor in keeping your books.

Made in four styles of handsomely lithographed charts, with indexes and cards for cash record.

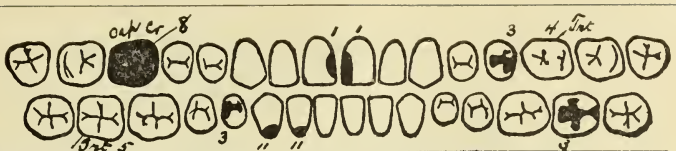
Prices: $5, $8, $10, $12.

Special forms of Charts made to order.

Write to your dealer for samples.

MONDAY.

5....Mo. 20
1900



8	H P Brown	20	00	1	Helen Clark	12	00
9				2			
10				3	Mrs E F Edgecomb amalgam	6	00
11	Mrs Oliver	6	00	4	Miss Allen	2	00
12				5	Laura Drew	2	00

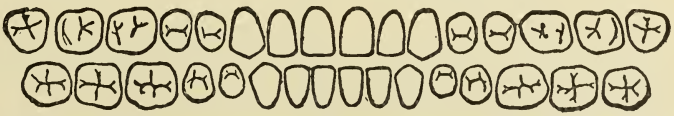
TUESDAY.

....Mo....

8				1			
9				2			
10				3			
11				4			
12				5			

WEDNESDAY.

....Mo....



8				1			
9				2			
10				3			
11				4			
12				5			

(See opposite page.)

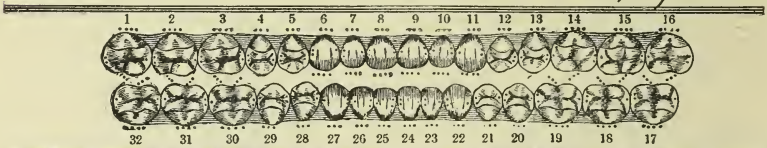
Bannister's Register-Ledger.

Copyright secured.

Published by The Ransom & Randolph Co., Toledo, Ohio.

Mr. Frank Kirby Refer to J. M Townsend.

Residence. East Toledo Street. Front No. 967.



Date	No.		Dr.	Cr.
Nov. 18	10 2	G.	3 50	
	14 2	A.	2	
	10 2	G. Mrs. Kirby	4	
	28 2	A. " "	3	
	31 1	G. "	4	
	26 2	G. Miss Florence	3	
	21	E. "	1	
	10 2	G. Willard	2	

CUT, TWO-THIRDS SIZE.

At the end of the day's work, or at any convenient time, the charges for the work done may be posted from the Bannister's Appointment-Day Book, illustrated on page 625 to the book illustrated herewith, and the operations registered.

Bannister's improved Dental Register is without doubt the most popular register on the market. It is the only register made in which the account of an entire family may be kept on one page without marking the cuts. Refer to the account of the Kirby family as it appears in the ledger. Notice that the account of each individual member is charged to Mr. Kirby, and that three of the family had fillings inserted in tooth No. 10, location "2" (2 dots).

The book contains a list of abbreviations corresponding to those used in the Appointment-Day Book, by the use of which much writing may be avoided and at a glance the dentist may know the history of the case in question. Its size, 7½x8x1½ inches, makes it more convenient for handling and filing away than any other on the market.

Made in four styles, all indexed and handsomely bound in leather with bands and ends.

PRICES.

Register No. 1, 340 pages, 1 account to each page.....$3.00
Register No. 2, 340 pages, 2 accounts to each page..... 3.00
Register No. 3, 340 pages, 250 pages 1 account, 90 pages 2 accounts to each page..... 3.00
Register No. 4, 340 pages, 240 pages 1 account, 83 pages 2 accounts to each page, and 53 pages (175 accounts) for registering mechanical work..... 3 00

Bannister's Bill Heads.

Copyright secured.

Published by The Ransom & Randolph Co., Toledo, Ohio.

Toledo, O Dec 1 1897

Mr Frank Kirby

DR. TO E J Gaylord.

RIGHT. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 LEFT.

32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17

COPYRIGHT SECURED.

NUMBERS INDICATE TEETH OPERATED UPON.

Dentist.

Prompt Payment Expected.

	TOOTH NO.	To Professional Services,				
Nov 18	10	Gold filling	3	50		
	14	Amalgam "	2	00		
	10	Gold filling Mrs K.	4	00		
	28	" " " "	3	00		
	31	" " " "	4	00		
	26	" " Miss Florence	3	00		
	21	Extraction " "	1	00		
	10	Gold filling Willard	2	00		
					22	50

The use of Bannister's Bill Heads enables a dentist to render a bill in such a way that the recipient can get an intelligent understanding of the different charges.

The abbreviations for the different operations used in the Appointment-Day Book and Ledger illustrated and described on pages 625 and 628, should be dispensed with and the name of the operation written in full.

Our imaginary Mr. Kirby will have no trouble in deciphering the bill against his family if his dentist uses the Bannister System of Dental Book-keeping.

Bill Heads, pads of 100.....$0.50

Lots of 500 with name and address..... 2.50

Pearson's Vest Pocket Appointment Book.

Published by E. W. Allendorph, Kansas City, Mo.

The neatest thing of the kind ever offered to the Dental profession, can be carried in the vest pocket, arranged for the appointment for eight hours of every working day in the year. Blank pages in book for memoranda; as now made there is a pocket for appointment cards on inside of the front cover, and the inside of the back cover is an erasable tablet. By using this little book, you have your appointments always with you. Bound in Red Russia Leather with pencil attached.

Price ..... 50 cents.
With your name neatly printed in gold on cover..... 75 cents.

Account and Appointment Books.

Published by The S. S. White Dental Mfg. Co.

The Meredith Pocket Dental Account Books.

The Pocket Dental Register and Appointment Book, 244 pages.
The Pocket Dental Journal and Appointment Book, 224 pages.
The Pocket Dental Ledger and Appointment Book, 208 pages.
Prices any style:

Cloth..... $1.25
Leather with tuck..... 1.50

Dentists' Pocket Diary and Appointment Book.

Contains blanks for 54 weeks.

Flexible cover, gilt edge..... $0.55
Flexible cover, gilt edge, with pocket and tuck..... .80

The S. S. White Dental Appointment Book No. 3.

312 pages, 5¼x9, leather..... $1.25

Griffiths' Appointment Book and Emergency Compendium. Size, 6x3½.

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Allport's Improved Registering Dental Ledger.

340 Pages, Half Turkey, Cloth Sides..... $3.50
340 Pages, Half Roan, Paper Sides..... 3.00
172 Pages, Half Roan, Paper Sides..... 2.00

The Warren Improved Dental Ledger.

No. 1, 308 Pages, 10x15..... $3.00
No. 2, Square form, 312 pages, 10½x10½..... $2.50

Waters' Dental Ledger.

101 Pages..... $3.50
201 Pages..... 6.50

Examination Blanks.

No. 1, 4⅝x2⅜, per tablet of 100..... $0.20
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No. 3, 3¾x3¾, per tablet of 50..... .20
Allan's Examination Record, 5¾x7½, per book of 100 leaves..... $0.30
Allan's Examination Record, 5¾x7½, indexed and paged..... .40
Record of Cataphoric Operations, 5x7, 100 leaves..... .40

Bill Heads.

No. 1, 8½x7, tablets of 100..... $0.60
No. 2, 7¼x4¼, tablets of 100..... .30
No. 3, 8½x7, tablets of 100, Allport design..... .60
No. 4, 8½x7, tablets of 100, Pettit design..... .60
No. 5, 7x8½, tablets of 100, Warren design..... .60

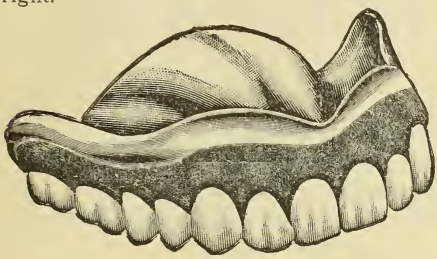
Sample pages of all Account Books and Examination Blanks mentioned above for the asking.

Bill Heads to Order.

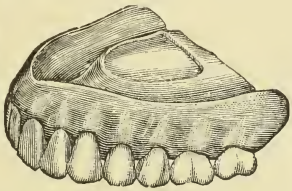
We would like to have an opportunity of quoting prices on high grade printing of this character. If our work is not better and our prices lower we won't expect the order. We have facilities for doing the best work that can be done.

Dental Cuts—Electrotypes.

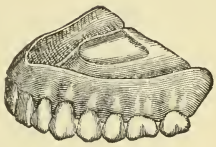
This is a list of our regular stock electrotypes. It is not a list of all we can furnish. We have unequaled facilities for duplicating work of this character. If you see an engraving anywhere and want one like it, send the picture to us. We'll do the rest. The price will be right.



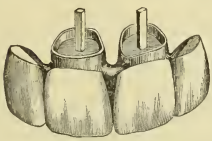
No. 1. $0.50.



No. 2. $0.40.



No. 3. $0.30.



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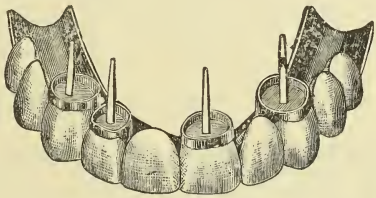
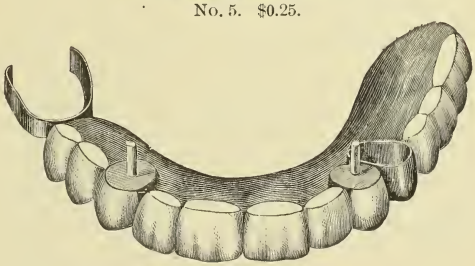


No. 5. $0.25.

No. 6. $0.20.



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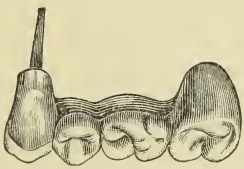
No. 8. $0.25.



No. 9. $0.25.

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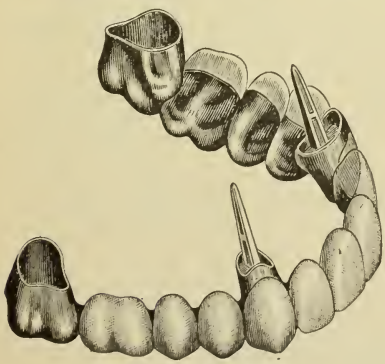
No. 11. $0.20



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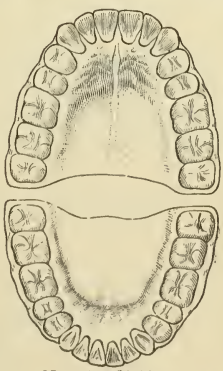

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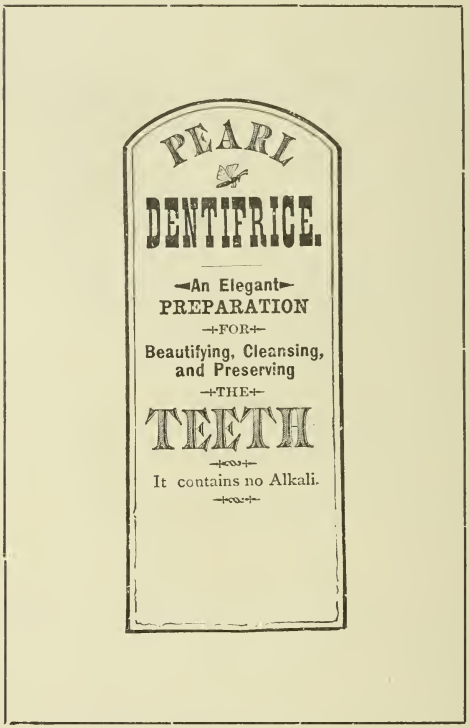

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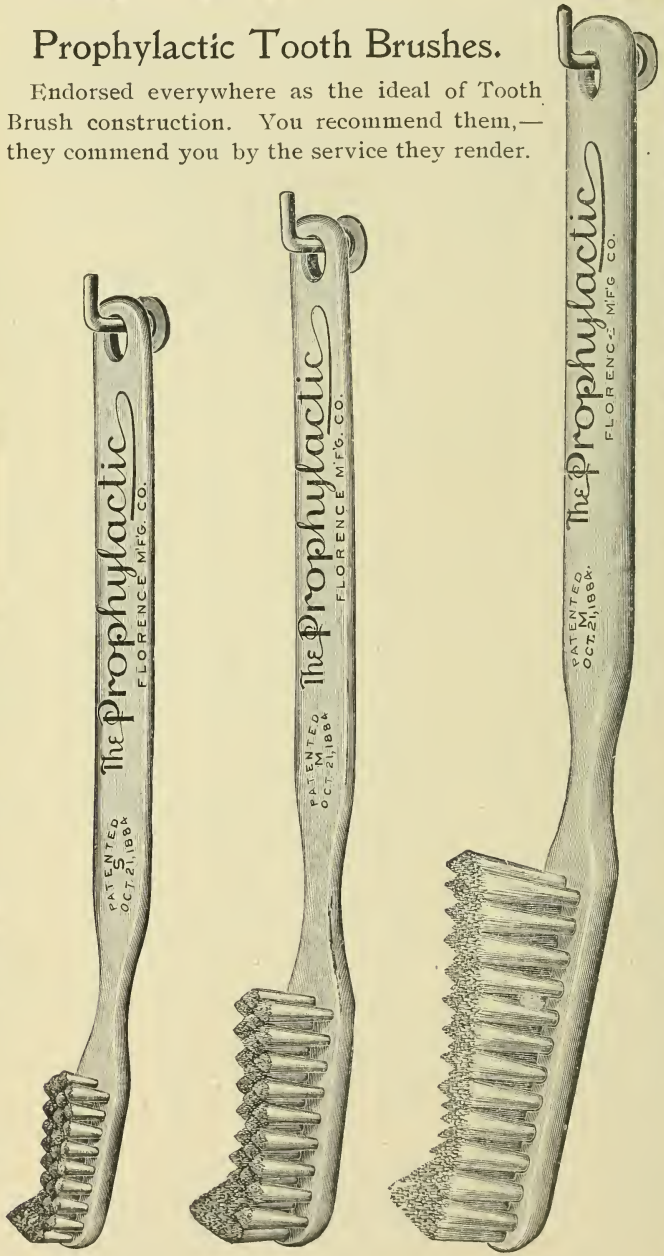

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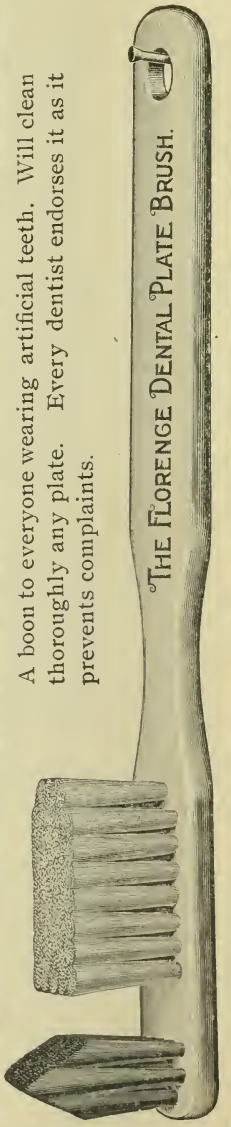

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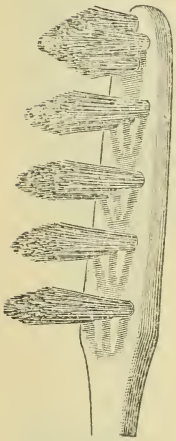
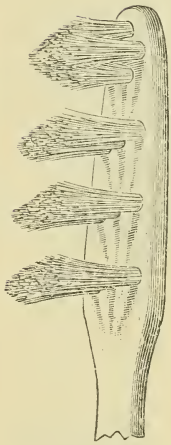


No. 1.



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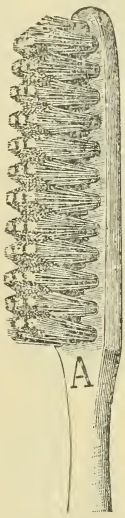
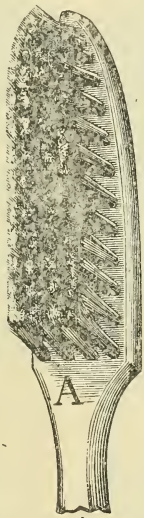


A
3 Rows.



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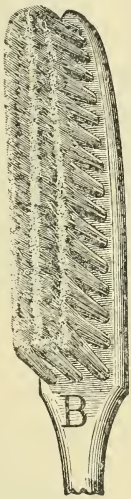
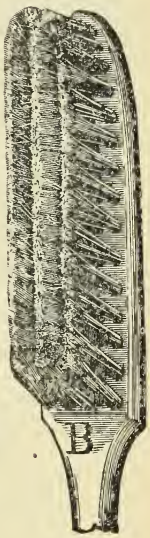


B
3 Rows.



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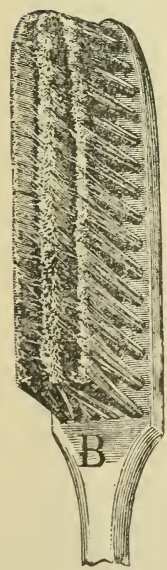
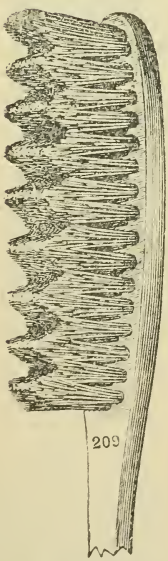


B
5 Rows.



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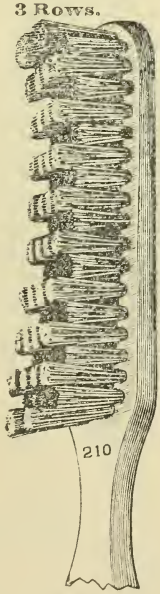

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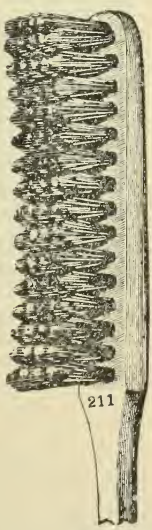
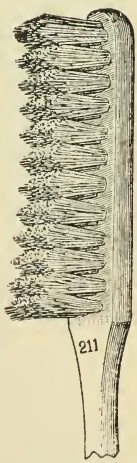


No. 211,
Large.

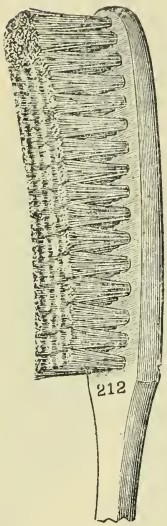


No. 211,
Small.

	Per doz.
No. 1	$3.00
No. 2	3.00
A 3-Row. Medium Bristles	3.00
A 3-Row. Soft Bristles	3.00
A 4-Row. Medium Bristles	3.50
A 4-Row. Soft Bristles	3.50
B 3-Row. Medium Bristles	3.00
B 4-Row. Medium Bristles	$3.50
B 5-Row. Medium Bristles	4.00
No. 209. Medium Bristles	3.50
No. 210. Medium Bristles	3.50
No. 211. Large, Medium Bristles	3.50
No. 211. Small, Medium Bristles (for children)	2.75

On tooth-brushes to dentist, 6-doz. lots, 12½ per cent.; 1-gross lots, 25 per cent. discount from above prices.

Tooth Brushes.—Continued.



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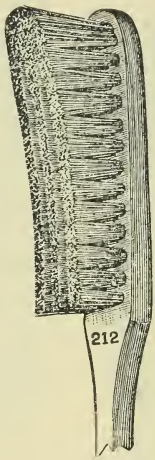

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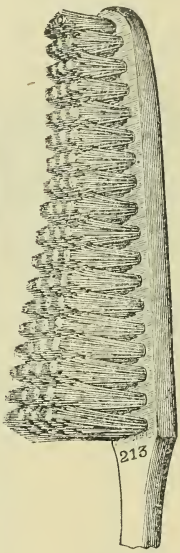

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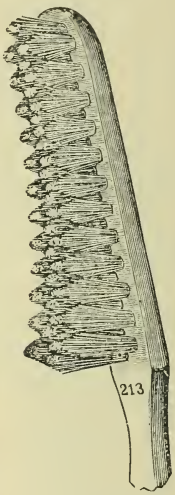

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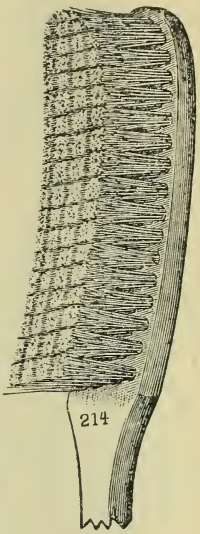

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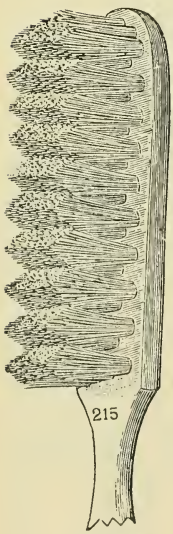
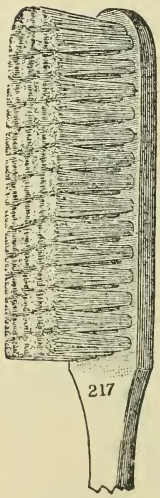


No. 215.

No. 216.



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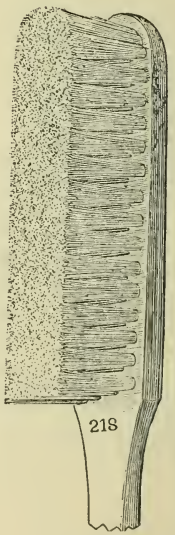

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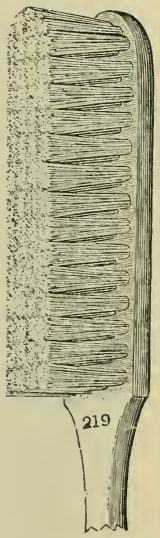
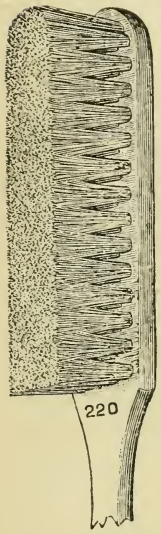


No. 219.

		Per doz.			Per doz.
No. 212.	Large, Medium Bristles	$3.50	No. 214.	Stiff Bristles	3.75
No. 212.	Small, Medium Bristles (for Children)	2.75	No. 215.	Medium Bristles	3.50
No. 213.	Large, Medium Bristles	3.75	No. 216.	Very Stiff Bristles	3.50
No. 213.	Small, Medium Bristles (for Children)	3.50	No. 217.	Medium Bristles	3.50
			No. 218.	Soft Bristles	3.50
			No. 219.	Soft Bristles	3.50

On tooth-brushes to dentists, 6-doz. lots, 12½ per cent.; 1-gross lots, 25 per cent. discount from above prices.

Tooth Brushes.—Continued.



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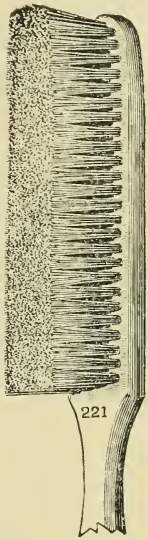

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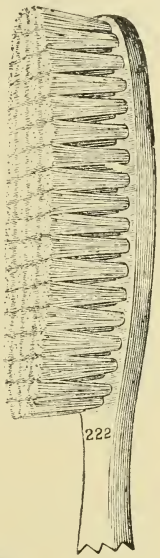

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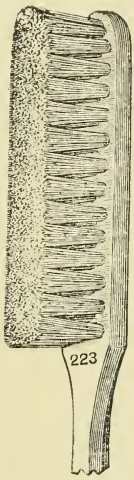

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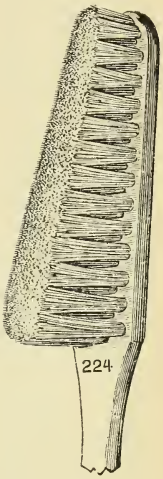

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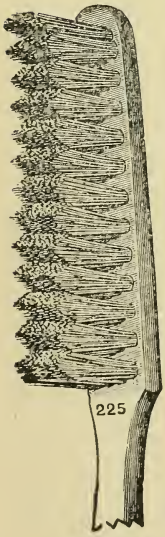

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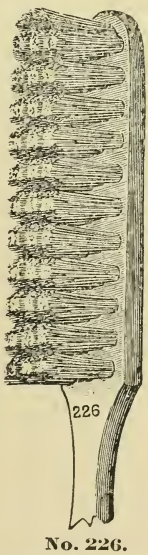

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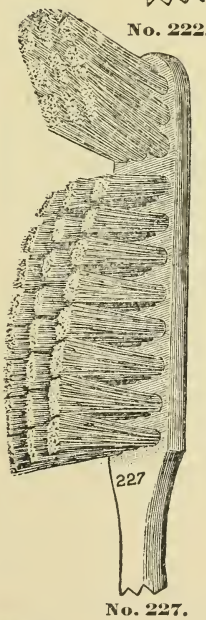

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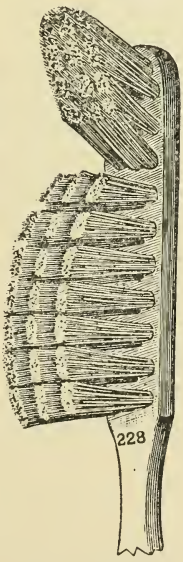

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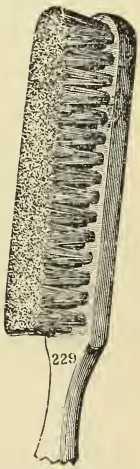

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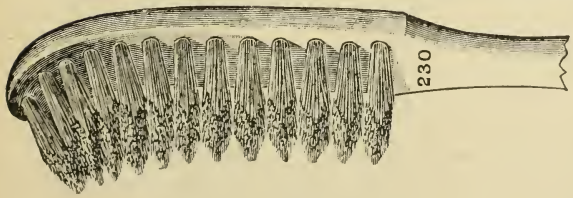
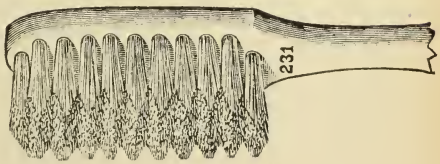




	Per doz.		Per doz.		Per doz.
No. 220. Very Soft Bristles (Goat Hair)	$3.50	No. 223. Medium Bristles	$3.50	No. 228. Soft Bristles	$4.50
No. 221. Very Soft Bristles (Badger Hair)	6.00	No. 224. Soft Bristles	3.50	No. 229. Soft Bristles (for children)	3.00
No. 222. Medium Bristles	3.50	No. 225. Medium Bristles	3.50	No. 230. Medium Bristles	3.75
		No. 226. Medium Bristles	3.50	No. 231. Medium Bristles	3.50
		No. 227. Medium Bristles	4.50		

On tooth-brushes to dentists, 6 doz. lots, 12½ per cent.; 1-gross lots, 25 per cent. discount from above prices.

Miscellaneous Articles in the Mechanical Class.

Blow-pipes—Knapp's, with Stand, but without Gas Cylinder or Gas	per dozen	$14.00
Blow-pipes—Knapp's, with Carburetter, without Gas Cylinder or Gas	each	20.00
Carburetter, separate	each	6.00
Brushes, Ideal for Laboratory	three for $1.00; each	.35
Brushes, Scratch No. 1		.50
Brushes, Scratch No. 2		.65
Clamps, for holding plates, while swaging	each $0.60 to	1.00

Bottles, Tooth-Powder, with Sprinkler Tops.

No. 1. (Large), Empty	per gross	$14.50
No. 1. (Large), Empty	per ½-gross	7.75
No. 1. (Large), Empty	per dozen	1.50
No. 1. (Large), Empty	each	.15
No. 1. (Large), Filled with No. 1 Tooth-Powder	per gross	43.00
No. 1. (Large), Filled with No. 1 Tooth-Powder	per ½-gross	23.00
No. 1. (Large), Filled with No. 1 Tooth-Powder	per dozen	4.50
No. 1. (Large), Filled with No. 1 Tooth-Powder	each	.40
No. 2. (Small), Empty	per gross	12.00
No. 2. (Small), Empty	per ½-gross	6.50
No. 2. (Small), Empty	per dozen	1.25
No. 2. (Small), Empty	each	.12
No. 2. (Small), Filled with No. 1 Tooth-Powder	per gross	31.00
No. 2. (Small), Filled with No. 1 Tooth-Powder	per ½-gross	16.50
No. 2. (Small), Filled with No. 1 Tooth-Powder	per dozen	3.25
No. 2. (Small), Filled with No. 1 Tooth-Powder	each	.30
No. 3. Nickel Top, Empty	per gross	14.50
No. 3. Nickel Top, Empty	per ½-gross	7.75
No. 3. Nickel Top, Empty	per dozen	1.50
No. 3. Nickel Top, Empty	each	.15
No. 3. Nickel Top, Filled with No. 1 Tooth-Powder	per gross	31.00
No. 3. Nickel Top, Filled with No. 1 Tooth-Powder	per ½-gross	16.50
No. 3. Nickel Top, Filled with No. 1 Tooth-Powder	per dozen	3.25
No. 3. Nickel Top, Filled with No. 1 Tooth-Powder	each	.30

Boyd's Method for Lining Vulcanite Dentures.

Vulca No. 1	per box	1.00
Vulca No. 2	per box	1.00
Adhesit	per bottle	.25
Aluminum Foil (25 sheets)	per book	.30
Camel's-Hair Brushes, A, B, C	each	.06

Corundum Cups, Files, etc.

Cones, 5/8-inch diameter at base, 1¼-inch high	each	$0.12
Cups, Small	each	.12
Cups, Large	each	.15
Slabs, Nos. 1 and 4	each	.35
Slab, No. 2	each	.15
Slab, No. 3	each	.20
Files, No. 5	each	.15
Files, No. 6	each	.15
Files, No. 7	each	.20
Files, No. 8	each	.25
Files, No. 9	each	.25
Files, No. 10	each	.15
Files, No. 11	each	.15
Files, No. 12	each	.15
Crucibles, Plumbago, No. 00	each	.20
Crucibles, Plumbago, No. 0	each	.20
Crucibles, Plumbago, No. 1	each	.22
Crucibles, Sand	nest of four	.08

Draw Plates, furnished on order. Specify range of sizes desired.

Fyrite	per can	.25
Handles, Wood, for files, etc., assorted sizes	each	.05
Inlay Apparatus, Jenkins, complete		100.00

Miscellaneous Articles in the Mechanical Class.—Continued.

Inlay Apparatus, Jenkins less bellows		95.00
Kaolin, prepared	per pound	.10
Knife Cleaners	each	.50
Marble Dust	per quart	.10
Polishing Putty (Oxid of Tin)	per box	.20
Platinum Foil for Crown and Bridge Work, Thickness of our No. 30 Gold Foil	per ounce	26.00
Rouge, Stick		.20
Silex, Coarse	per lb	.25
Silex, Fine	per lb.	.50
Silex, Extra Fine	per lb.	1.00
Silex, Double Fine	per lb.	2.00
Soldering Irons	each	.25
Spar, Body	per lb.	.75
Spar, Enamel	per lb.	.75
Spatula, Sand Molding	each	1.00

Scotch Stones, 6 in. long, 3-16 in. square	each	$0.06
Scotch Stones, 6 in. long, 1-4 in. square	"	.08
Scotch Stones, 6 in. long, 3-8 in. square	"	.10

Stoves:

Kerosene, with one 4-in. Burner	each	$1.50	
Bell Gas Bracket Stove	"	.15	
Wicks for Kerosene Stoves, 4 in.	per doz.	$ .30	
Wicks for Kerosene Stoves, 2 in.	"	.25	

Seamless Gold Collars for Crown and Bridge Work.

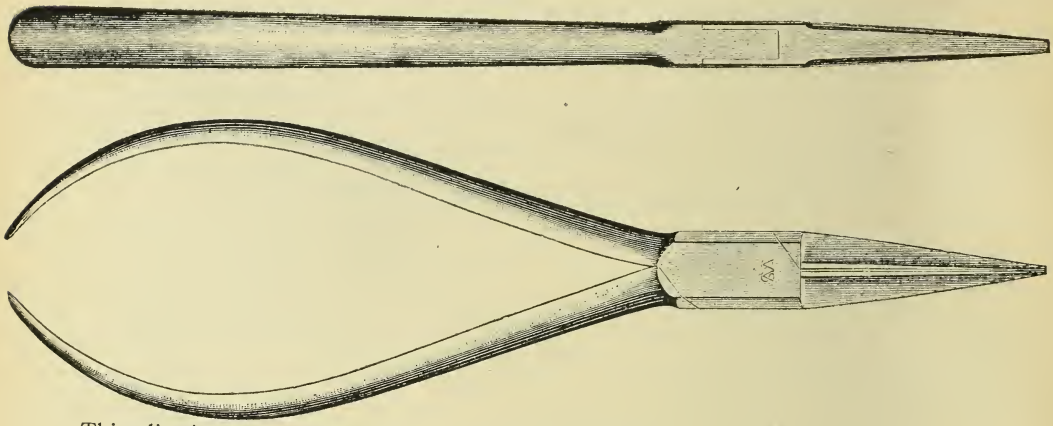
Nos.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Each,	34c.	36c.	38c.	40c.	42c.	45c.	48c.	50c.	52c.	54c.	56c.	58c.	60c.	62c.	65c.
Nos.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Each,	58c.	62c.	66c.	70c.	74c.	78c.	82c.	88c.	94c.	98c.	$1.02	$1.07	$1.12	$1.17	$1.22
Nos.	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Each,	82c.	88c.	94c.	$1.00	$1.06	$1.12	$1.18	$1.26	$1.34	$1.42	$1.50	$1.58	$1.66	$1.74	$1.82

Complete set of 45 Collars $40.00

Appliances for Shaping Gold Collars:

Contractors for reducing	each	$1.50
Mallet for Swaging	"	1.50
Mandrel for Shaping (set of 7)	"	1.00
Crown Heater and Setter No. 1 for Front Teeth	"	.50
Crown Heater and Setter No. 2, for Bicuspid Teeth	"	.50
Pin Punch, Logan	"	.25
Pins for Setting Tooth Crowns, Logans, Nos. 1, 2 and 3	"	.45
Tongs, Crucible, Iron, 12-in.	"	.50
Tongs, Crucible, Iron, 17-in.	"	.65
Trays for Logan Crowns		1.00
Tubing, conducting, 1-8-in. inner diam.	per ft.	.08
Tubing, conducting, 3-16-in.	"	.12
Tubing, conducting, 1-4-in.	"	.16
Tubing, conducting, 3-8-in.	"	.20
Tubing, conducting, 1-2-in.	"	.25
Tubing, conducting, 5-8-in.	"	.30
Tubing, conducting, 3-4-in.	"	.35
Tubing, conducting, 1-in.	"	.45
Vises, Bench		$2.50 to 7.00
Vises, Hand, with Wood Handle		1.00
Wire Gauze for Fyrite	per box	.30

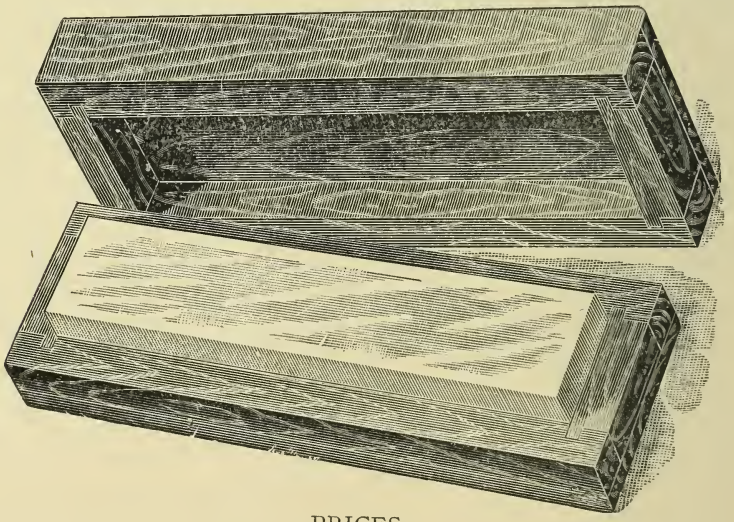
Laboratory and Office Pliers.



This plier is made with plain as well as serrated beaks.
We have two grades. The better is made by the S. S. White Dental Mfg. Co.
Price .. ..each $1.50 Cheaper grade .....each $1.00

Arkansas and Washita Oil Stones.

Made by Buffalo Dental Mfg. Co.



PRICES.

Wood Mounted Arkansas Stones	each $ .60	Rubber Mounted Arkansas Stones	each $ .75
Wood Mounted Washita Stones	each .50	Rubber Mounted Washita Stones	each .60

Carborundum Slab.

We carry in stock a little smooth Carborundum Slab, made by The Carborundum Co., that is a wonder. It is the biggest little thing in our stock. It is four inches long, an inch wide, and a quarter of an inch thick. It will put an edge on a delicate instrument quicker than any stone on earth. The agents of The Carborundum Company authorize us to buy these back at the price paid for them if they are not satisfactory after say six months' use.
Price ....each 25 cents.

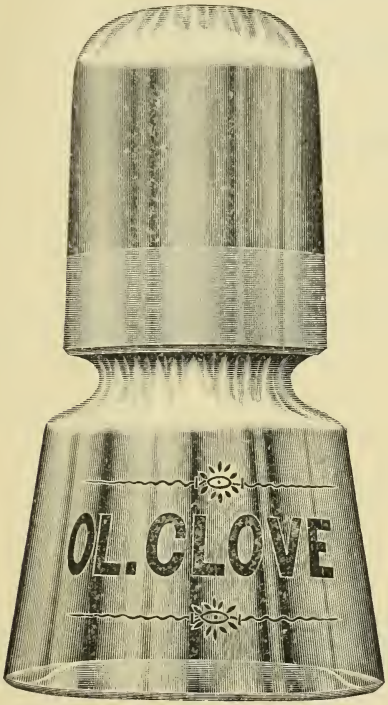
Arkansas Stone Slips

No. 1.	Knife-Edge Slips	each $ .60	No. 4.	Round-Edge Slips	each $ .50
No. 2.	Double Knife-Edge Slips	each .60	No. 5.	Square Slips	each .40
No. 3.	Pointed Slips	each .35	No. 6.	Flat Slips	each .40

Labelled Office Bottles.

CUTS FULL SIZE.

Manufactured by the Ransom & Randolph Co., Toledo, Ohio.



No. 1.

No. 2.

The bottles herewith illustrated are indestructably labelled, the names of the drugs having been burned in, obviating the necessity of frequently replacing the ordinary paper label, and giving the dentist bottles of uniform appearance.

Furnished to order with any label though they are regularly kept in stock in sets of twenty labelled as follows:

Ac. Carbol.	Ac. Tannic.	Chlorof.
Cocain Cryst.	Ol. Clove.	Ol. Eucalypt.
Chlor.-Perch.	Ammonia.	Iron Persulph.
Alcohol.	Ac. Arsen.	Iodine.
Black's 1-2-3.	Iod. & Aconit.	Ac. Sulph.
Silv. Nit.	Ol. Cass.	Creosote.
Ac. Lactic.	Sandarach.	

In ordering, specify style preferred.

Price of either style, per set of 20.....$5.00

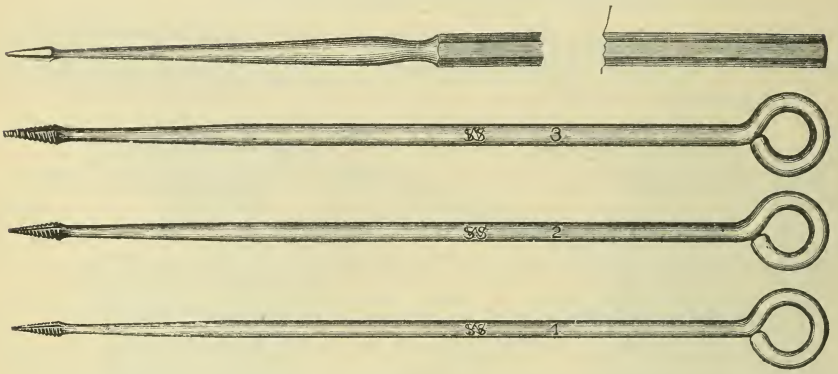
Each, as labelled, or to order..... .30

Plain Bottles.

We are also prepared to furnish three sizes of bottles, style of No. 1 shown above, without labels at the following prices:

1½ oz.	Clear Glass only	each $ .25;	per dozen $2.50
6 oz.	Clear Glass only	each .35;	per dozen 4.00
½ oz.	Clear, blue, amber or green.....	each .15;	per dozen 1.60

Morrison Reamer and Screw-Portes.



The Reamer is used to enlarge the openings into the canals of badly decayed roots to permit the entrance of the Screw-Porte for their extraction. Three sizes of the Screw-Portes are made to suit differences in roots. The Reamer is made only on Octagon Handle.

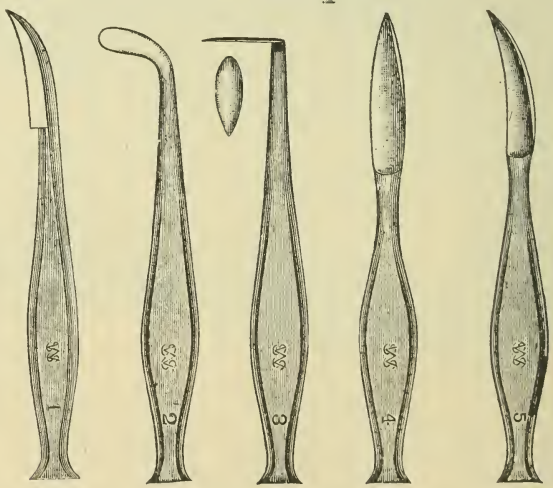
The complete set is put up in a neat box with spaces let into a wood block to keep the instruments in place when not in use.

PRICES.

Per set, in box	$2.00
Reamer ..... each	.50
Screw-Portes ..... each	.50

Not kept in stock for Cone-Socket Handles.

Lancets.—Fixed Blades.



PRICES.

Ivory Handle (Nos. 1, 2, 3, 4 and 5) ..... each	$0.75
Ebony Handle (Nos. 1, 2, 3, 4 and 5) ..... each	.60
Steel Handle, ¼ in., File-cut (Nos. 1, 2 and 3) ..... each	.50
Steel Octagon Handle, Abscess (Nos. 4 and 5) ..... each	.38
Cone-Socket Points (Nos. 1, 2, 3, 4 and 5) ..... each	.35

Derenberg's Tweezers.

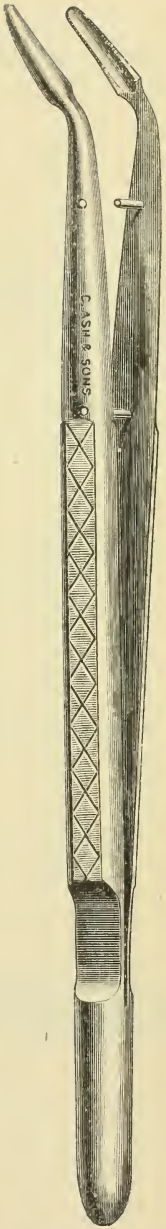
For Removing Loose and Temporary Teeth, Dressings, Etc.

The appearance of this instrument serves to disarm the fears of the patient. To ensure a firm grip being obtained, the beaks are hollowed out and serrated inside.

It is a combination of the usual extracting Forceps and existing forms of Tweezers, the latter of which are usually so light and made with points much too fine and small to possess the needful strength for doing the work for which this instrument is intended.

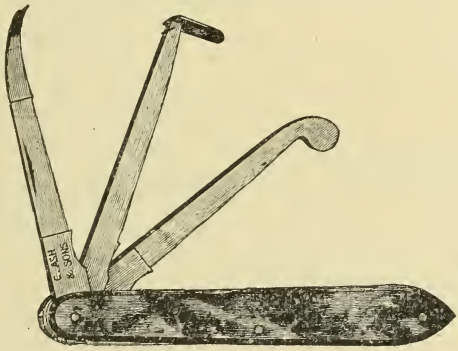
Mr. Derenberg finds it very useful for removing loose and temporary teeth, dressings, etc.

Price, Nickel-plated $2.25



Full Size.

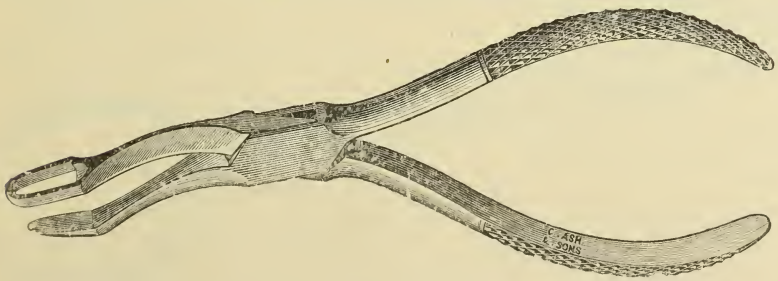
Lancets for Pocket.



	BLADES.		
	1	2	3
Lancets, for pocket, in Tortoise-shell handles, each.....	$1.00	$1.50	$1.75

Gum Guillotine Forceps.

Designed by Mr. Woodhouse.



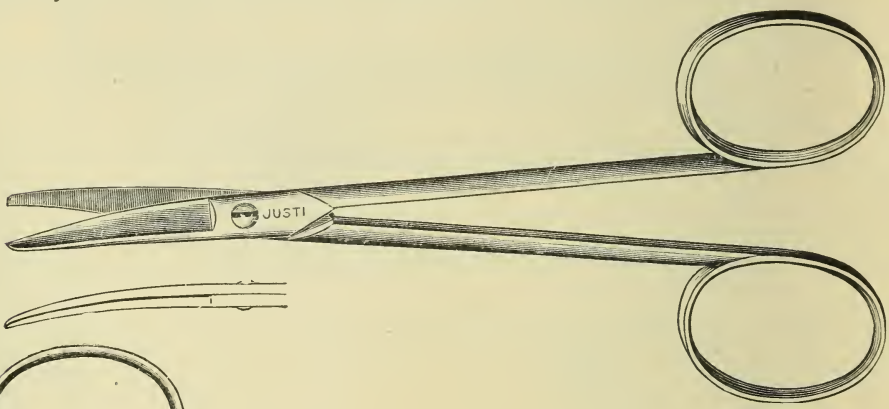
For removing gum from the masticating surfaces of partially erupted wisdom teeth. Before applying the Forceps, make an incision with a lancet along the anterior margin of the tooth; then insert the blade and remove the gum by firmly closing the handles.

This instrument cannot be Nickel-plated without spoiling the cutting edges.

Price, in polished steel only..... $3.00

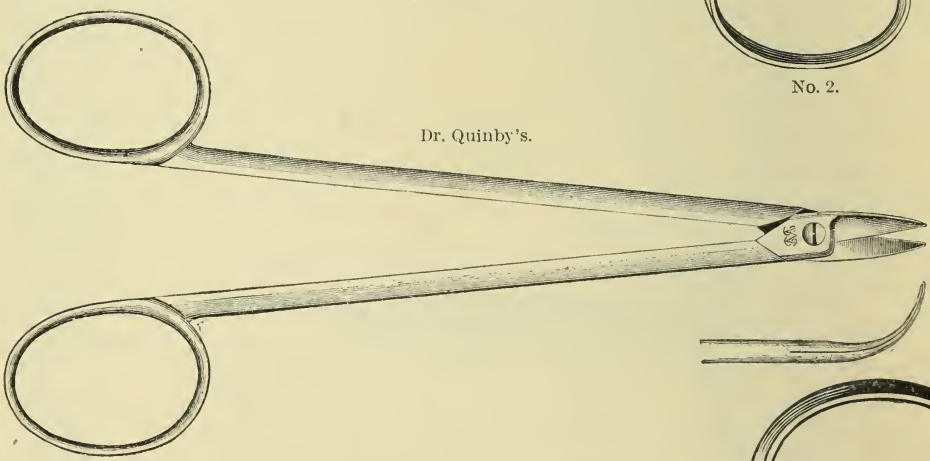
Gum Cutting Scissors.

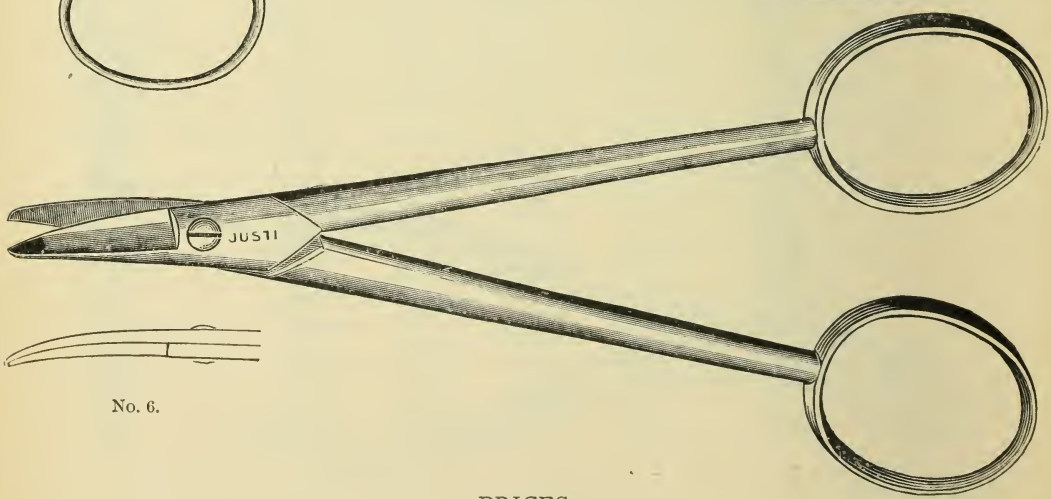
Lack of space prevents the illustration of our entire line of these instruments. We illustrate only the more popular forms. We have them all. Prices quoted are for the highest grade only.



No. 2.

Dr. Quinby's.





No. 6.

PRICES.

No. 1, Small size, Straight Blades	per pair	$1.25
No. 2, Small size, Curved Blades	per pair	1.50
Dr. Quinby's Pattern	per pair	1.75
No. 3, Large size, Straight Blades	per pair	1.00
No. 4, Large size, Curved Blades	per pair	1.25
No. 5, Extra large size, Curved Blades	per pair	1.50
No. 6, Dr. Flagg's Pattern, Curved Blades	per pair	1.75

We have duplicates of most of above patterns in cheaper qualities at cheaper prices.

Miscellaneous Goods in the Operative Department.

Anatomical Illustration of an Incisor Tooth, Abbott's	each	$ 1.00
Anatomical Illustration of the Fifth Nerve	each	1.00
Anatomical Lantern Slides (Dr. Cryer's)	each	1.00
Articulating Disks, per box of 100	each	.10
Binders for Dental Cosmos	each	.50
Bur Thimbles, Hinged	each	.50
Burs, Excavating, Round No. 20 Bur Gauge, Hand cut	each	.40
Cable Spring Attachment		2.25
Cases—Bur, for Students	each	.50
Cases—Medicine, with 18 bottles, $2.25. Empty	each	1.00
Cases—Office Polishing Powder	each	1.00
Case—Folding Instrument—Imitation Morocco, Velvet lined, for Varney's Set 13, Chappell's Set 13, Pluggers	each	3.00
Case—Imitation Morocco, for Anchor Screw Instruments	each	.50
Case—Slip-form for Varney's Set 13, Chappell's Set 13, Knowles' Set 13, Pluggers	each	.80
Case—Slip-form for Electric Mallet Pluggers. Set 15	each	.80
Carving Tools, Dr. W. W. Evans':		
Apple Wood Handles, Nos. 1 and 2	each	1.25
Apple Wood Handles, No. 3	each	1.50
Chamois Skins	each 10c to	1.00
Cotton Holder, for Holmes' Table	each	2.00
Crown Setter No. 1, for front teeth	each	.50
Crown Setter No. 2, for bicuspid teeth	each	.50
Doilies or Napkins, 6 inches square, colored borders	per dozen	.50
Doilies or Napkins, 7 inches square	per dozen	.55
Doilies or Napkins, 12½ inches square	per dozen	1.25
Drop Tubes	each	.10
Dub's Screw Forcep	each	5.50
Engine Bit Oiler		.50
Files—Serrating, per dozen, $3.60	each	.30
Files—Flexo, Separating, perforated, Nos. 000, 00, 1 and 2, push cut, per dozen, $1.40;	each	.15
Gutta percha washers	per box	.50
Handpiece, Bonwill, for S. S. White Engine		10.00
Handpiece, Bonwill, for Bonwill Engine		14.00
Holder for same	each	.35
Hullihen's Screw Forcep	each	4.00
Manicure Forcep	each	2.50
Mandrel, No. 303½	each	.15
Moustache Protector	each	.75
Mouth-Distenders, Nickel-plated, with Polished Wood handles	each	.60
Oil Can for Engine and Hand-Piece	each	.15
Oil, Sperm, 3 oz. bottle	per bottle	.20
Pivot Wood	per box	.50
Pliers—Flagg's Wafering	each	2.00
Pulleys—New Patent Universal Pulleys, enabling Motor to be placed in any part of office.		
Ceiling or Wall Pulley, complete		3.40
Ceiling or Wall Pulley, with Universal Joint and Extension Rod		6.00
Rubber Dam Appliers, ¼ in. File-cut Handle	each	1.25
Rubber Dam Appliers, ⅝ in. Bone Handle	each	1.62
Rubber Dam Appliers, ⅝ in. Ebony Handle	each	2.00
Rubber Dam Appliers, ⅝ in. Ivory Handles	each	3.00
Saliva Pump, Glass, with Rubber Bulb	each	.75
Scalers, Pyorrhea, Marshall's, per set of eight, $4.00	each	.50
Spatula—No. 15. Foil, Nickel-plated, wood Handle	each	1.50
Spatula—Foil, Bone	each	.25
Strips—Finishing, Sand and Emery Paper and Carrier, 50 Strips and 1 Carrier in a Box	per box	.12
Strips—Finishing only (50 in a box)	per box	.10
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